

Serological response of different commercial Swine Influenza vaccines.

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INTRODUCTION

Swine Influenza (SI) is one of the most important respiratory diseases in pigs¹. In endemically infected farms, vaccination can play a crucial role in the prevention of the clinical impact of the infection². Humoral response to vaccination is a key factor for developing the clinical protection in front of the infection of SIV³.

In this study, we compared the humoral response of 3 different commercial SI vaccines available in Asian market.

MATERIALS AND METHODS

49 ten weeks old SI seronegative pigs were randomly distributed in 4 groups and vaccinated with a commercial dose vaccine at day (d) 0 and d21 of the study: Vaccine A (n=15); GRIPORK[®] (HIPRA) (n=15); Vaccine C (n=15) and control group (n=4) injected with PBS solution.

Humoral immunity was assessed during 55 days of trial. Blood samples were taken from all piglets included in the study at d0, d21, d35 and d55. IDEXX influenza A Ab ELISA kit was used to measure vaccine humoral immunity. Percentage of seropositive pigs and average of serological titers (sample/negative control ratio) were compared between groups at the different sampling times.

RESULTS

At d35 of the study 100% of pigs vaccinated with GRIPORK[®] showed seroconversion. On the other hand, just approximately half of the pigs vaccinated with the 2 other commercial vaccines showed seroconversion at d35. Moreover, at d55 all pigs vaccinated with GRIPORK[®] remained positive while percentage of positive pigs dramatically decreased for both vaccine A and C (see table 1). GRIPORK[®]

also showed the highest titers ratios from d35 to d55, despite no significant differences was observed between groups (see figure 1).

Table 1. Percentage of positive pigs, IDEXX ELISA kit.

	Day 0	Day 21	Day 35	Day 55
CONTROL	0%	0%	0%	0%
Vaccine A	0%	0%	53,30%	0%
GRIPORK [®]	0%	6,67%	100%	100%
Vaccine C	0%	6,67%	46,67%	13,30%

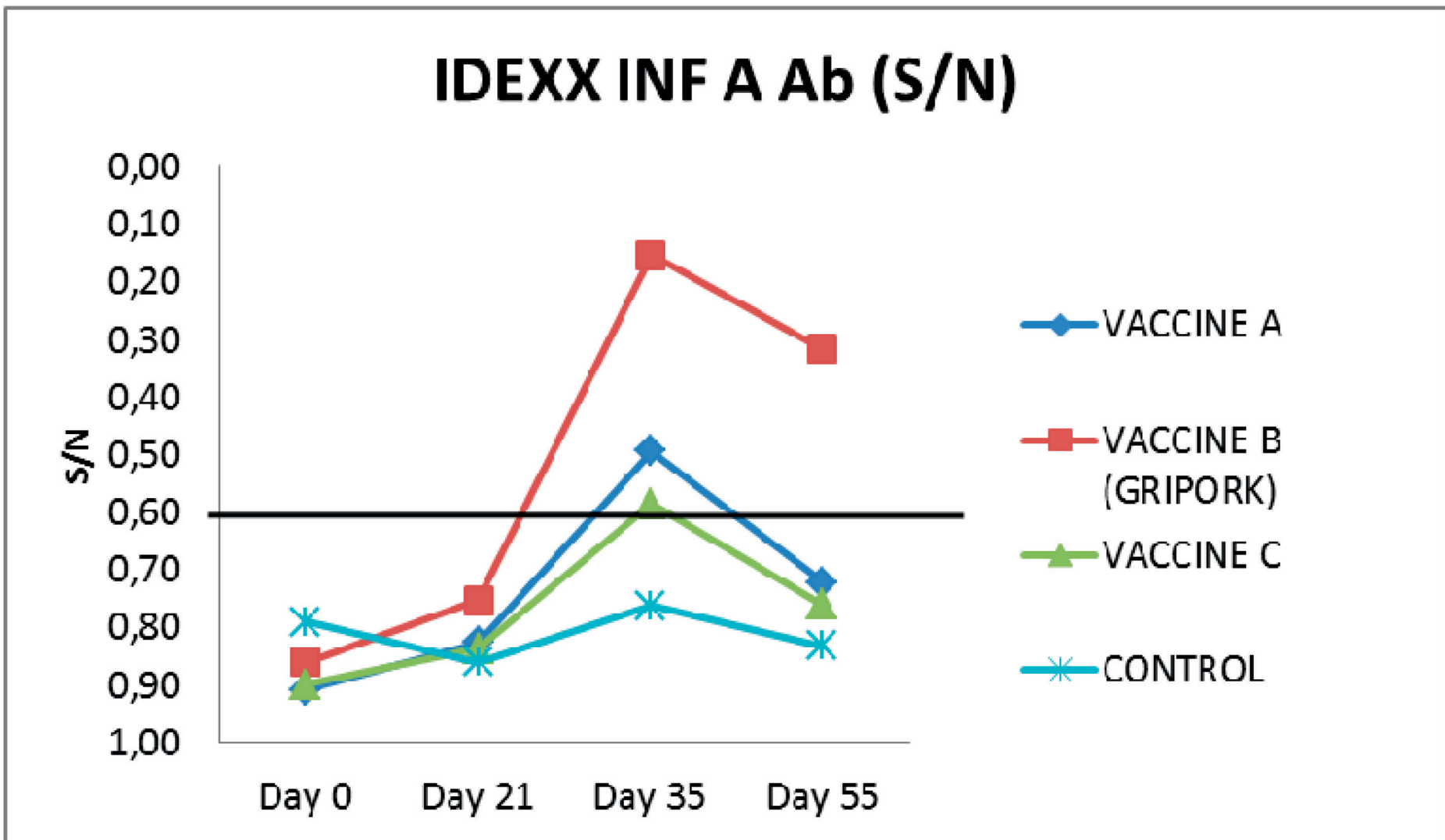


Figure 1. IDEXX sample/negative control ratio (S/N). Test cut-off: S/N ≥0.6 = negative; S/N <0.6 = positive.

DISCUSSION

In this study, GRIPORK[®] showed the strongest and longest serological response compared to 2 other commercial vaccines, and being the only one providing complete seroconversion to the whole vaccinated population. Thus, vaccination with GRIPORK[®] could be a very useful tool for the prevention of SI in endemically infected farms.

REFERENCES

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