

Vaccination with PRV vaccine (AUSKIPRA® GN; Bartha k61 strain), reduced virus shedding when challenge against Chinese PRV variant (AH02 strain)

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INTRODUCTION

Since 2011 several Pseudorabies (PR) outbreaks have damaged Chinese swine industry¹.

In this study MLV PRV vaccine (AUSKIPRA®GN reconstituted in A3 diluent, HIPRA) was challenged with new PRV variant (AH02 strain) isolated from a farm suffering from acute outbreak of PRV in China.

Virus shedding on nasal swabs was studied in two independent experiments.

MATERIALS AND METHODS

30 PRV seronegative 4 to 6 weeks old piglets were randomly divided into two independent experiments (n=15) and subdivided in three groups (table 1).

Table 1.

Group	Treatment	Dose	Challenge virus	Number
A	AUSKIPRA® GN	One dose, 2ml	AH02 strain	5
B	PBS	2ml	AH02 strain	5
C	PBS	2ml	-	5

Piglets were treated intramuscularly at D0 and challenge 7 day later (D7). Nasal swabs of all piglets were collected daily for PRV titration by Karther method (D0 to D21).

RESULTS

No virus shedding was detected in any piglets, in any replicate in C groups. In the first experiment, all piglets from group B showed virus shedding in nasal swabs with titers $10^{1.125-2.365}$ TCID₅₀/0.1mL, from 1 to 2 days. In the second experiment, group B virus shedding was detected in 4 piglets with titers $10^{1.125-3.625}$ TCID₅₀/0.1mL lasting for 1 to 3 days. For group A, no virus shedding in piglet at the first replicate was detected. Only one piglet in A group in the second experiment showed; virus shedding titer of $10^{0.625}$ TCID₅₀/0.1mL, lasting for 3 days (Table 2).

Table 2.

Group	No. (a/b)	First experiment			Second experiment		
		Titer (c)	Time (day)	No (a/b)	Titer (c)	Time (day)	
A	0/5	/	/	1/5	$10^{0.625}$	3	
B	5/5	$10^{1.125-2.365}$	1~2	4/5	$10^{1.125-3.625}$	1~3	
C	0/5	/	/	0/5	/	/	

Note: No. number of piglets. "a" indicates the number of piglets that virus shedding was detected in nasal swabs. "b" number of piglets of the group. "c" titer of virus expressed as TCID₅₀ in 0.1 mL

DISCUSSION

AUSKIPRA®GN vaccine reduce PRV shedding after AH02 strain challenge. Therefore, AUSKIPRA®GN can be a useful tool to control PRV infection in Chinese farms.

REFERENCES

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