Clinical protection study of pseudorabies vaccine (AUSKIPRA® GN; Bartha k61 strain), in piglets infected with new Chinese PRV variant

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INTRODUCTION

Since 2011, several Pseudorabies (PR) outbreaks have damaged Chinese swine industry[1].

The purpose of this experiment is to test the efficacy of pseudorabies vaccine AUSKIPRA®GN (HIPRA) against new pseudorabies virus variant (AH02).

MATERIALS AND METHODS

Fifteen healthy and PRV free, from 4 to 6 weeks old piglets were randomly divided into 3 groups. Group A: inoculated intramuscularly (IM) with one dose (2ml) of AUSKIPRA®GN (Bartha k61) reconstituted with RED solvent (aqueous diluent) at D0 and challenged intranasaly (IN) with AH02 strain at D7 (n=5); Group B: inoculation IM with 2mL PBS at D0 and challenged IN with AH02 strain at D7 (n=5); Group C: inoculation IM with 2mL PBS at D0 and no challenge (n=5).

Clinical signs and body temperature of all animals were recorded from three days before vaccination until 14 days post challenge. At D14, piglets were euthanased and lung lesions were evaluated.

RESULTS

After challenge, morbidity and mortality were lower in groups A than in group B *(Table 1)*.

Table 1. *Percentage of morbidity and mortality*

Group	Morbidity (%)	Mortality (%)
A	40	0
B	100	60
C	0	0

Two piglets in group B died at D5 and one died at D6 post challenge.

Fever incidence and duration in group A were lower than in group B. *(Table 2)*

Table 2. *Incidence and duration of fever.*

Group	Fever(≥40.5℃) frequency	
	Number of pigs (a/b)	Time (days)
A	2/5	1 to 2
B	5/5	2 to 8
C	0/5	0

Note: “a” indicates the number of piglets that showed fever. “b” indicates the number of piglets of the group.

All piglets in group B presented lung lesions with severe hemorrhage and congestion. None of group A and C piglets presented lung lesions *(Table 3)*.

Table 3. Lung lesions score

Group	Lung lesion	
	-	+
A	5	0
B	0	5
C	5	0

Note: - means no lesion; + means with lesions of severe hemorrhage and congestion

DISCUSSION

In this study AUSKIPRA®GN reconstituted with RED solvent reduce mortality, lung lesions and fever. Therefore, AUSKIPRA®GN can provide clinical protection in front of new PRV strains.

REFERENCES

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