

EFFICACY OF AN ATTENUATED PRRSV VACCINE OF THE EU GENOTYPE IN WEANLING PIGS

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Abstract The objective of this study was to evaluate the efficacy of a modified live porcine reproductive and respiratory syndrome (PRRS) vaccine of the EU genotype for controlling the disease induced by Thai PRRSV isolates in 3-weeks-old pigs. Group I is a negative control group. Two positive control groups are Group II challenged with the EU genotype (02SB3) and Group III challenged with the US genotype (01NP1) on day 42 of the study or when pigs were 9-weeks-old. The vaccinated groups are Group IV and Group V initially vaccinated twice on day 0 and 21 and later challenged with 02SB3 or 01NP1 on day 42, respectively. Following the Thai PRRSV inoculation, viremia was observed in all challenged groups. However, virus titration demonstrated that the vaccinated groups had lower virus titers than those of the positive control groups. At necropsy, the positive control groups had more PRRSV-positive lung samples than those of the vaccinated groups measured by nested multiplex RT-PCR. The antibody responses was detected by a commercial ELISA by 7 days after the first vaccination and peaked on day 28. No anamnestic response was seen following the second vaccination. Significant serum neutralizing antibody (SN) titers against the vaccine virus were found only in the vaccinated pigs. An average SN titers over 1:4 were observed from day 42 and continuously increased (1:128) to the end of the study at day 72. Interestingly, no detectable SN titers against the Thai isolates (01NP1 or 02SB3) were seen in any group. Our results indicated that previous vaccination twice with the modified live PRRSV vaccine of the EU genotype could reduce viremia in some degree even in the heterologous challenged group. However, no clear conclusions could be drawn from the study of the SN titers, pathological lesions and the productivity parameters. **Chiang Mai Veterinary Journal 2007;5(1):29-49.**

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