



VIRAL DISEASES

VVD-021

SEROPREVALENCE OF ATYPICAL PORCINE PESTIVIRUS IN A SUBCLINICALLY INFECTED CLOSED PIG HERD

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Introduction

In recent years, several cases of congenital tremor in piglets have been associated with atypical porcine pestivirus (APPV). Only limited information is available about prevalence at herd level and the potential source of introduction. Therefore, the aim of this study was to determine the within-herd prevalence of APPV infection in a subclinically infected sow herd in Switzerland and to analyse associations between serological results and the age of the pigs, litter number and days after last insemination.

Material & Methods

In a closed sow herd blood samples from all sows aged 180 days or older (n=125) and six boars were collected. A total of 131 samples were examined applying an APPV RT-PCR targeting the NS3 and NS4B encoding regions of APPV and an indirect APPV-specific ELISA. The APPV antibody status was classified into low (S/P value <0.5), intermediate (S/P value=0.5-1) and high reactive (S/P value >1.0).

Results

In 53.4% of the samples S/P values >1.0 were determined, 39.7% showed an intermediate reactivity and only 6.9% samples showed low reactivity, i.e. were serological negative. Significant associations between the S/P values and the age of the pigs (p<0.001), the litter number (p<0.001) and the days after last insemination (p=0.0075) were observed. None of the serum samples, analysed in pools of five, were positive for specific genome fragments of APPV as determined by RT-PCR.

Discussion & Conclusion

The results indicate that this sow herd was endemically infected with APPV, although viremia was detected in none of the adult pigs. This might explain the absence of clinical signs in suckling pigs of this herd. A potential reinfection and spreading of APPV in this sow herd might be due to semen from a commercial boar studs or introduction of APPV-positive animals in the absence of specific clinical signs.