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VVD-046 - ROTAVIRUS TYPE A ASSOCIATED DIARRHOEA IN NEONATAL PIGLETS: IMPORTANCE AND BIODYNAMICS

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Background

Rotavirus A (RVA) is a well-known course of diarrhoea in piglets, but the infection dynamics and clinical impact are not fully elucidated. The aim was to determine the significance of infection with RVA in relation to neonatal diarrhoea.

Material/Methods

Two commercial swine herds with neonatal diarrhoea and a positive RVA diagnosis were included. Five litters from each of two herds and a total of 132 piglets were sampled. The animals were subjected to a daily clinical examination and faeces were collected daily from all piglets. The piglets were weighed at beginning and at the end of study. The outbreak day was defined as the day where >25 % of the litter showed clinical diarrhoea, and for all litters this was either the 4th or 5th day of life. On outbreak day, fecal samples from all piglets in the litter were analysed for RVA together with samples collected two days prior to outbreak day from 54 of the 132 piglets. The analyses were made by a RVA specific RT-qPCR. Virulent E. coli was ruled out by PCR as differential diagnosis in all litters by testing a pooled sample on the outbreak day.

Results/Discussion

In total, 43%(57/132) of the piglets had clinical diarrhoea and 66%(87/132) were positive for RVA on the outbreak day. For comparison, 89%(51/57) of the diarrheic piglets and 48%(36/75) of the non-diarrheic piglets were positive for RVA which was significantly different (P<0.001). Piglets that tested negative for RVA had a higher weight gain over the 4-day period (mean 363g vs. 278g,P<0.05) despite that the positive piglets had a significantly higher birthweight (mean 1,45kg vs. 1,27kg,P<0.05). Furthermore, 63%(34/54) of the piglets developed diarrhoea within 24 hours after a positive RVA diagnosis.

The results confirmed that RVA has a significant impact on incidence of diarrhoea and weight gain also in E. coli negative litters.