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TITLE

EVALUATION OF SERUM PORCINE TESCHOVIRUS TITER IN GROWER PIGS WITH NEUROLOGICAL SIGNS – A LONGITUDINAL STUDY

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CONTENT

Background & Objectives

In an organic fattening pig herd in Switzerland growers presented with anorexia, inappetence, poor growth, fever and neurological signs. After necropsy of affected pigs, porcine teschovirus (PTV) had been identified in the gastrointestinal tract and related lymph nodes. However, it was unclear when the infection of the pigs occurs. Therefore, a longitudinal study was performed in both piglet producing and fattening farm to identify the time of the PTV-infection in these pigs.

Material & Methods

Serum samples of pigs (n=15) were obtained beginning with 3 weeks of age five-times every four weeks, whereas the first two serum collections were conducted at the piglet producer and the remaining collections at the fattener. The PTV-neutralisation-titer (NT) was analysed for all 75 serum samples using a PTV-specific neutralization test. A Friedman test and the corresponding posttest were used to compare the PTV-NT of the pigs among the different timepoints to identify the time of infection.

Results

The PTV-NT differed significantly among the timepoints ($p < 0.0001$), whereas the first (median PTV-NT: 33) and second (median PTV-NT: 90) timepoint at the piglet producing site had significantly lower PTV-NT than the third (median PTV-NT: 288, for both: $p < 0.01$), fourth (median PTV-NT: 226; for both: $p < 0.05$) and fifth (median PTV-NT: 422; for both: $p < 0.001$) timepoint at the fattening site. The two timepoints at the piglet producer were significantly different ($p > 0.01$); however, the data showed a three to six time higher PTV-NT in the pigs at the fattener than piglet producer.

Discussion & Conclusion

The longitudinal study showed a three to six times higher PTV-NT in pigs at the fattening site, which might indicate that the time of PTV-infection occurs rather here than at the piglet producing site. Therefore, the fattener should take action to prevent PTV-infection in the subsequent pig batches.