

## VVD-OP-04

### TITLE

MULTISYSTEMIC INFLAMMATION IN PIGLETS IN A HERD WITH CONGENITAL TREMOR AND CONCURRENT DEFORMITIES

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### CONTENT

#### Background and Objectives

An episode of congenital tremor (CT) with concurrent increase in piglet deformities in a breeding herd was investigated.

#### Material & Methods

Clinical and herd details were obtained and postmortem examinations undertaken by the Animal and Plant Health Agency (APHA) on laboratory submissions of tremor-affected (n=7) or deformed piglets (n=7). Histopathology (special stains, immuno-histochemistry) and virological examinations (PCRs, sequencing, virus microarray) were performed.

#### Results

Both conditions were present for a four-month period; maximum incidence was 8% of litters in a weekly batch. Litters with CT-affected piglets were born to gilts, while deformed piglets were mostly born dead to sows of any parity with occasional pigs in these litters developing tremors post-natally. Deformities included a range regularly seen at low levels in breeding herds, more unusual were piglets with arthrogryposis. Widespread multisystemic inflammation, mainly of lymphoplasmacytic infiltrates, was detected in tissues from the deformed stillborn and post-natal tremor piglets. These infiltrates suggested a chronic systemic antigenic stimulus, likely reflecting in utero viral infection. No PRRSV or PCV2 involvement was detected. Atypical porcine pestivirus (APPV) was detected by RT-PCR in blood and nervous tissue of all tremor-affected piglets examined but not in deformed piglets. Virus microarray detected only APPV in CT-affected piglets, while porcine circovirus 3 was detected in deformed piglets and confirmed by RT-PCR with low Ct values.

#### Discussion & Conclusion

The unusual combination of clinical signs prompted submissions to APHA. Findings support the presence of CT type A2 associated with APPV in some piglets. However, the multisystemic inflammation in other piglets was inconsistent, APPV has not been described causing deformities, and was not detected in deformed piglets. At this stage, findings suggest that more than one viral aetiological agent may be involved with the presence of APPV and PCV3 confirmed. Further investigations still in progress will be presented.