



CASE OF REPRODUCTIVE FAILURE IN GILTS CHARACTERIZED BY DELAYED DELIVERY AND MUMMIFICATION OF FOETUSES

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Background and Objectives

The porcine parvovirus (PPV), more correctly named Ungulate protoparvovirus 1 species, is a single-stranded DNA virus classically leading to stillbirths, mummification, embryonic death and infertility (SMEDI). PPV viruses are prone to constant mutations and are classified into several strains of variable pathogenicity, some of them with very high virulence. Here we report a recent clinical case of SMEDI in vaccinated gilts.

Material and Methods

In May 2020, an Austrian PRRS-free farm counting around 200 sows (farrow-to-finish) with fair reproductive performances reported multiple reproductive disorder. For repro-prophylaxis, the gilts were vaccinated twice pre-mating and boosted every six months by a commercial PPV-NADL2 + Erysipelas rhusiopathiae (Ery) combo-vaccine. After being one day late, farrowing was induced in one gilt which then delivered 5 mummies. Mummies and serum from selected gilts/ sows, as well as boar semen, were submitted for laboratory investigations. Two other farms receiving gilts from last facility experienced similar reproductive issues but were not available to investigation.

Results

Pooled organ samples from the mummified foetuses (10, 12, 12, 12, and 30 cm) shown in Figure 1., contained high PPV viral load by real-time PCR (Cq values of 9.5) while resulted negative to Chlamydia, Leptospira, PCV2 and PRRSV. Furthermore, no antibodies against PRRSV were detected in serum. Vaccine management and application was controlled and found to be up to good standards (vaccinated by veterinarian). Application of a PPV-K22 + Ery combo-vaccine reversed the reproductive disorders.



Figure 1. Aborted material detected after first clinical picture and submitted for further investigation.

Discussion and Conclusion

Vaccination against PPV and Ery is one of the most basic protocols for breeding stock worldwide. As mentioned previously, PPV strains can have different levels of pathogenicity, genetic clusters, and variable antigenicity. When vaccinating against PPV there are indications that the PPV-Kresse-like strain K22 as an antigen confers a wider and more efficient clinical PPV protection than the NADL-2 strain, particularly against virulent strains.