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EXPERIMENTAL INOCULATION IN PREGNANT SOWS WITH BOVINE VIRAL DIARRHEA VIRUS 2

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Bovine viral diarrhea virus (BVDV) is genetically and serologically related to other members of the genus Pestivirus, such as classical swine fever virus, and may cause reproductive problems, but there is still a lack of research to determine the pathogenicity in different gestational periods of sows (pigs) and consequences in newborn piglets. The objective of this work was the analysis of the effect of bovine viral diarrhea virus infection in gestation and in swine neonates. Twelve pregnant sows divided into five groups were used, which were inoculated experimentally with the BVDV-2 strain, one group with 30 days before insemination (G0); three groups during gestation, first (G1), second (G2) and last third (G3); and the fifth control group (G4). Samples of blood, serum and nasal swabs were collected every three days from the day of inoculation through the farrowing. On the day of delivery, half of the newborns were euthanized to obtain blood and organ samples at necropsy. The collected samples were analyzed by means of the virus neutralization, real time RT-PCR, blood count and histopathology. The RT-qPCR was performed using the TaqMan system, Thermofisher™-VetMAX™-Gold BVDV Detection Kit commercial kit. Serial dilutions of VS253 were diluted at 100 and 107 to detect the limit of RT-qPCR. All sows seroconverted

during the gestational period, except the control group and BVDV-2 was detected in blood and nasal swabs in G0, G1, G2 and G3 sows with a Ct<36, the viremia was detected from day 3 post-infection (dpi) through 12 dpi and viral shedding was detected from 6 dpi through 23 dpi, and the piglets developed gliosis. G1 sows presented thrombocytopenia at day 36 after inoculation. The dynamics of BVDV-2 infection in pigs was clarified, such as the serological and viremic profile, shedding phase and clinical characteristics; however, transplacental virus transmission was not detected.

Biography

Pereira D A is pursuing her PhD at the University of São Paulo, Brazil. Her expertise is in the health of swine. She works on laboratory techniques such as molecular and immunodiagnostics for swine diseases, especially RNA and virus (Pestivirus). She graduated in Veterinary Medicine in 2009. She received a scholarship from FAPESP (Brazilian Funding: process: 2015/08531-0) and has over 9 publications. She has also been serving as a member of Suinesp (Group of studies in swines).

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