Porcine parovirus (PPV) is a common cause of reproductive failure of swine characterized by clinical signs that are usually without maternal clinical signs. It is known, that gilts especially are at risk due to lack of immunological protection, when maternal antibodies have disappeared. Serological examinations in Danish herds, however, have shown that a variable number of sows in different herds also are negative for antibodies to PPV and therefore susceptible to the infection. Two methods for immunoprophylaxis are available: 1) Vaccination of susceptible breeding animals, and 2) natural immunization by establishing an active infection of gilts before breeding. To obtain natural immunization an effective spread of the infection among gilts is necessary. As the spread apparently can be insufficient, an experiment was set up to obtain more knowledge about virus excretion and antibody development after infection with PPV.

Three gilts (no. 1, 2 & 3) without antibody to PPV and two gilts (no. 4 & 5) with passively acquired antibodies were infected by oral and nasal inoculation of PPV. Three PPV antibody negative gilts (no. 6, 7 & 8) were kept in direct contact with the infected gilts from the 3rd day after infection. Stably infected gilts were housed in contact and the infected gilts were housed in contact. No. 6, 7 & 8 were kept in direct contact with the infected gilts from the 3rd day after infection. Stably infected gilts were housed in contact. No. 6, 7 & 8 were kept in direct contact with the infected gilts from the 3rd day after infection.

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Excretion of PPV in nasal secretions, faeces and urine of gilts occurs within about 2 weeks after infection. This information, and the finding, that the concentration of PPV in the excretions is low, contribute to explain, why the spread of PPV infection within individual herds can be insufficient resulting in low herd immunity.

Viremia occurs in PPV antibody negative gilts and the virus can be found in serum within about 11 days after infection. In leukocytes PPV can persist for some weeks after infection. An antibody response with high titers to PPV is developed about 7 to 10 days after infection.