

IMM-OP-05

TITLE

COLOSTRUM IMMUNE TRANSFER EVALUATION IN PIGS BY USING FLU HI TEST AT 3 WEEKS OF AGE

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CONTENT

Background and Objectives

Immune transfer via the colostrum in the pig can be investigated using a total IgG test in early life. However, the effectiveness of the different types of IgG for the immune response remains unknown. This is the reasoning behind looking at antibodies specific for one particular disease. The purpose of this study is to evaluate the maternal transfer of Influenza specific antibodies.

Material & Methods

In 10 farms, piglets were blood sampled at one day of life (n=496) for total IgG dosage (RID) and at 3 weeks of life (n=495) for Hemagglutination Inhibition (HI) test for six different Influenza serotypes. The colostrum of 59 corresponding sows was also sampled and the same HI test was performed on them. All farms were either supposed positive for an infection with Influenza and/or were vaccinating the sows with a trivalent Influenza vaccine. HI test results are presented in 2-fold dilution (1=20 in HI test; 10 = 10240).

Results

First results regarding H1avN1 show that all but one colostrum sample were positive. Titers varied from three to 10; those of the piglets from zero to seven. HI titers of the piglets were not linked with total IgG level at day one. At day one, 10% of piglets have less than 20 mg/ml of total IgG and around 40% of these die before three weeks. At three weeks, 18% of piglets had a zero H1avN1 titer. The main criterion for the variation in the piglets' titer at 3 weeks was the colostrum titer of the sow. Piglets that were cross-fostered in the first 24 hours had lower values.

Discussion & Conclusion

These preliminary results reveal interesting details about the transfer of immunoglobulins from sows to piglets regarding six Influenza subtypes and its variation factors.