THE EFFECTS OF VACCINATION ON THE IMMUNE RESPONSE IN PSEUDORabies VIRUS CHALLENGED SWINE

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Introduction: The phenomenon of cell-mediated immunity can be evaluated by the effects of specific antigens on lymphocytes in vitro. The blast transformation test measures the in vitro proliferative response of previously sensitized T cells to specific antigen. The lymphoproliferative response of swine lymphocytes to pseudorabies virus (PRV) has been recently reported.1,2

Objectives: The objectives of this study were to determine if the development of cellular immunity is useful in predicting response to challenge and to determine the degree of protection due to vaccination.

Materials and Methods: Binary-shoot-sewervaccinated tanned male pigs were utilized. Animals were free of clinical signs of rhinitis and were necropsied to rule out any evidence of pseudorabies. The pigs were divided into groups 1, 2, 3, 4, 5, 6, 7, and 8, and 16 pigs were included in each group.

Results: The study was conducted under the supervision of the veterinarian in charge of the experiment. The pigs were observed carefully throughout the experiment, and the results were recorded. The data were analyzed statistically, and the results were presented in a tabular form. The conclusions drawn from the study were that vaccination with PRV vaccine in groups 1, 2, and 3 was effective in reducing the incidence of pseudorabies in pigs.

Conclusions: The PRV vaccine utilized in this experiment did not induce a primary humoral immune response detectable by the HTLV test for 8 months after vaccination, while the PRV antibody was detectable in pigs vaccinated with a single dose of PRV vaccine. The fluorescent antibody test was positive in all pigs vaccinated with PRV vaccine. The study results indicate that vaccination with PRV vaccine is an effective means of reducing the incidence of pseudorabies in pigs.