Effect of cyclosporine A on the response of pigs to experimental rotavirus and coronavirus T.G.E. infections


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Because of its immunodepressive activity and its low toxicity, cyclosporine A is successfully used in human medicine to inhibit the rejection of organ transplants.

Immunodepressive agents often stimulate the development of viral or bacterial infections.

Prior to an intestinal grafting in human infant, 34 pigs of 25 kg were used as an experimental model to determine whether the daily oral administration of cyclosporine could modify the response of the organism to an experimental rotavirus and coronavirus T.G.E. infection. There was no significant difference between treated and untreated animals as regards their clinical response and the humoral immune reaction to these two enteropathogenic viruses.

Oral immunization of sows against transmissible gastroenteritis using the T.G.E.-coronavirus strain 188-SG


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Strain 188-SG of T.G.E.-coronavirus isolated in our laboratory and whose properties were previously described was used as a live virus vaccine to immunize seronegative pregnant sows. Sows were orally inoculated 6-7 weeks before farrowing according to a procedure developed in our laboratory. A booster injection was done IM 7-15 days before farrowing.

Immunity was thereafter tested using two methods:
— determination of the level of passive protection conferred to suckling piglets against a virulent challenge exposure 4-8 days after farrowing;
— determination and titration of neutralizing anti T.G.E. antibodies in the sow serum and milk.