

ON THE INFECTIVITY AND PERSISTENCE OF *CAMPYLOBACTER* SPP. IN CHICKENS, THE EFFECT OF VACCINATION WITH AN INACTIVATED VACCINE AND ANTIBODY RESPONSE AFTER ORAL AND SUBCUTANEOUS APPLICATION OF THE ORGANISM.

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Abstract

The infectivity of *Campylobacter*s depended on the strain chosen for infection. In experimental trials, the excretion rate and the excretion period of the organism seemed to be related to the age of chickens. Vaccination with an mineral oil vaccine as well as a previous infection with a heterologous strain did not and prevent subsequent infection or shorten the excretion period. After oral infection and after parenteral application of the agent, chickens reacted by development of antibodies which can be demonstrated with the ELISA and the immunoprecipitation test.

Introduction

Most poultry flocks are carriers of *Campylobacter* spp. and represent a risk factor for human campylobacter infections. Only few data exist on the duration of the carrier state after infection with campylobacters and suggest that campylobacter infections in birds are limited to a certain period (TRUSCOTT und MORIN, 1963; MONTROSE *et al.*, 1985). The aims of our work were to examine the carrier status in laying hens at the end of the laying period, to study the infectivity of some *Campylobacter* strains in SPF chickens, to get further information on the duration of carriage in respect of the age of birds, to examine if a infection with one strain influences the excretion period after a subsequent infection with a second strain, and to study if a vaccination with a mineral-oil vaccine has a protective effect on the campylobacter infection.

Occurrence of campylobacters in laying hens at the end of the production period:

At the end of the production period, 29 layers each from 70 different flocks were examined for the occurrence of campylobacters in their caecal contents. All flocks were found campylobacter positive. Up to 20 individuals of 13 flocks and 21 to 29 birds of 57 flocks were carriers of *Campylobacter* spp. Material of the liver was additionally

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