

Avian infectious bronchitis: Viral persistence in the harderian gland and histological changes after eyedrop vaccination

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The histological changes in the harderian gland (HG) induced by the attenuated H-120 infectious bronchitis virus (IBV) vaccine strain and the persistence of this virus in the stroma of the gland was evaluated in chickens after eyedrop vaccination. Virus replication induced an increase in IBV-specific enzyme-linked immunosorbent assay antibody levels from marginal levels at vaccination (26 days of age) to significantly higher levels 10 days after exposure. IBV antigen was detected in the HG by both immunofluorescence using a monoclonal antibody and virus reisolation in embryonated chickens eggs until day 14 postvaccination. Lymphocytic, heterophilic, erythrocytic, and plasma cell infiltration as well as epithelial cell integrity in collecting tubules and acini were evaluated in the HG throughout the experimental period. IBV vaccination with the attenuated vaccine strain H-120 resulted in partial damage to the HG, as demonstrated by both the presence of plasma cells showing Russell bodies