Selected Abstracts From the Literature


Duck virus enteritis is a contagious disease caused by herpesvirus in waterfowl populations. Recovered birds become carriers and shed the virus periodically. Reactivation of latent duck enteritis virus (DEV) has been implicated in outbreaks of duck virus enteritis in domestic and migrating waterfowl populations. In this study, the sites for virus latency were determined in white Pekin ducks (*Anas platyrhynchos domesticus*) infected with the DEV-97 strain. At 3 weeks postinfection, infectious virus was not detectable in tissues or cloacal swabs (CSs). At 7 and 9 weeks postinfection, the viral deoxyribonucleic acid was detected by polymerase chain reaction in the trigeminal ganglia, suggesting that the virus is latent. Viral DNA was detected in the peripheral blood lymphocytes (PBL), spleen, thymus, bursa, and CSs only after in vitro cocultivation. In vivo virus reactivation was demonstrated when dexamethasone or a combination of dexamethasone and cyclophosphamide was inoculated in lamellar DNA was detectable in the peripheral blood lymphocytes (PBL), spleen, thymus, bursa, and CSs only after in vitro cocultivation. In vivo virus reactivation was demonstrated when dexamethasone or a combination of dexamethasone and cyclophosphamide was inoculated in latently infected ducks. The reactivation of DEV occurred without any clinical evidence of the disease, but the virus was detected in PBL and CSs. We conclude from this study that DEV establishes latency in trigeminal ganglia and lymphoid tissues including PBL.


Avian poxvirus was isolated from nodules on the heads and conjunctiva of two 3- to 4-week-old ostrich chicks. The ostriches from which poxvirus was isolated had been placed on premises where turkeys that had shown evidence of poxvirus infection had been raised earlier. Microscopically, the nodules from the ostriches were composed of proliferating and hypertrophic epithelial cells that formed large fronds. Most of the hypertrophic epithelial cells contained large eosinophilic inclusion bodies characteristic of poxvirus. Characterization of the avian poxvirus isolated from the cutaneous lesions in ostriches was based on Western blotting of virus antigen, restriction fragment length polymorphism of genomic DNA, pathogenesis, and cross-protection studies in chickens. Antigenic and genetic studies did not reveal any significant difference between the poxvirus isolated from ostriches and fowl poxvirus (FPV). Further, susceptible chickens immunized with the poxvirus isolate from ostriches were protected when challenged with a virulent strain of FPV. Thus, the poxvirus isolated from ostriches had similar antigenic, genetic, and biological properties to FPV.


Samples of brain, intestine, liver, lung, spleen, and bursa of Fabricius were collected from 5 common eider (*Somateria mollissima*) duckling carcasses during a die-off in the western Gulf of Finland (59°50’N, 23°15’E) in June 1996. No viral activity was observed in specific-pathogen–free chicken embryos inoculated with tissue suspensions, but samples of bursa of Fabricius from 3 birds were positive when inoculated in Muscovy duck (*Cairina moschata*) embryo fibroblasts. The isolates were characterized as nonenveloped ribonucleic acid viruses and possessed several characteristics of the genus *Orthoreovirus*. Virus particles were icosahedral, with a mean diameter of 72 nm and were stable at pH 3.0; their genome was separated into 10 segments by polyacrylamide gel electrophoresis. Mallard (*Anas platyrhynchos*) ducklings experimentally infected with the eider reovirus showed elevated serum activities of aspartate aminotransferase, creatine kinase, and lactate dehydrogenase enzymes and focal hemorrhages in the liver, spleen, and bursa of Fabricius. During 1997–99, the prevalence of neutralizing antibodies to the isolated virus ranged from 0% to 86% in 302 serum samples collected from incubating eider hens at 3 nesting areas along coastal Finland. The highest seroprevalence was found in Hanko in 1999, just weeks before reports of an uninvestigated mortality event resulting in the death of an estimated 98% of ducklings at that location. These findings raise the question of potential involvement of the virus in poor duckling survival and eider population declines observed in several breeding areas along coastal Finland since the mid-1980s.


An outbreak of reovirus, herpesvirus (*Pacheco disease*), and/or mycosis infection (*Aspergillus* species and *Zygomycetes* species) affecting a batch of young African grey parrots (*Psittacus erithacus*), with 80% morbidity and 30% mortality, is reported. Study material was taken from 5 birds (4 dead and 1 euthanized) with a range of clinical symptoms (depression, diarrhea, respiratory symptoms). Diagnosis was confirmed by immunohistochemical detection of avian reovirus, electron microscopy, and virus isolation. Viral antigen of reovirus was detected mainly in large mononuclear cells in the bursa of Fabricius and the spleen, pancreas epithelial cells, and