



Avian Encephalomyelitis (AE) or Epidemic Tremor

Cause

Avian encephalomyelitis (AE) is caused by an enterovirus belonging to the picornavirus group.

Transmission

Egg transmission is the major route of transmission of AE virus. Infected breeders will transmit the AE virus for several weeks and cause a decrease in egg hatchability. Infected chicks that hatch will show clinical signs of the disease and spread the infection in the incubator to other newly hatched susceptible chicks. Young chicks can also be infected on the farm. The incubation period varies from 5 to 14 days depending on the route of infection.

Species affected

Primarily chickens are susceptible to AE, but turkeys and pheasants have been reported as natural hosts.

Clinical signs

The disease is mainly seen in young chicks, between 1 and 3 weeks of age. Affected chicks sit on their hocks, do not move well, and many fall on their sides. A fine, rapid trembling of the head and neck can be seen, but especially felt when affected chicks are held in the hand. In laying and breeding flocks, AE virus infection causes a marked drop in egg production which returns to

normal in about 2 weeks. Mortality in naturally infected chicks varies and can be as high as 75%.

Diagnosis

Clinical tremors in chicks, together with a drop in production and hatchability in the parent breeders, is indicative of AE infection. Chicks will not have gross lesions, but histological examination of brain, proventriculus and pancreas reveals typical lesions of AE. This will also differentiate the diagnosis of AE from encephalomalacia (Vitamin A deficiency, crazy chick disease). Laboratory testing of blood serum from breeder flocks, or their hatching eggs, can determine if an infection occurred.

Treatment and control

Preventive vaccination of breeder pullets with live AE vaccine before egg production is the only effective means of AE control. If a breeder flock has not been, or has been inadequately, vaccinated against AE and an outbreak occurs, it is advisable to stop hatching eggs from the flock for several weeks until the breeders have acquired immunity and no longer transmit AE virus through their eggs.