



Avian Encephalomyelitis: Causes, Symptoms, Diagnosis, and Control Measures

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Description

Avian Encephalomyelitis (AE) also known as Epidemic Tremors is a viral disease that affects young birds, especially chickens. This disease is caused by a small, non-enveloped, single-stranded RNA virus known as Avian Encephalomyelitis Virus (AEV) that belongs to the family Picornaviridae [1-3]. The virus primarily affects the central nervous system of the birds, leading to paralysis, tremors, and mortality. The disease can cause significant economic losses to the poultry industry due to the high mortality rate and the reduction in egg production. The Avian Encephalomyelitis virus is highly contagious and can spread rapidly through a flock. The virus can be transmitted through faecal-oral transmission, which can occur through contaminated feed and water, infected equipment, or from bird to bird contact. The virus can also be transmitted from an infected hen to offspring through the eggshell. Once a bird is infected with the virus, it can shed the virus in its faeces up to 8 weeks. The virus can survive in the environment for several weeks, making it a significant challenge to control the spread of the disease [4-7].

The symptoms of Avian Encephalomyelitis can vary depending on the age of the bird at the time of infection. In young birds, the disease can cause tremors, paralysis, and a reduction in growth rate. The birds may also have a reduced appetite and drink more water than usual. In severe cases, the birds may die suddenly without showing any symptoms. The virus primarily affects the central nervous system of birds, leading to neurological symptoms such as ataxia, tremors, and paralysis. The disease can result in significant economic losses to the poultry industry due to decreased weight gain, and high mortality rates of birds. The virus can also affect the reproductive organs, leading to reduced fertility and hatchability [8].

Clinical signs of AE typically appear within one to two weeks after infection. Affected birds may exhibit symptoms such as lethargy,

depression, and decreased appetite. As the disease progresses, neurological symptoms may become more apparent, including tremors, incoordination, and difficulty standing. Some birds may also experience blindness or seizures. Mortality rates can range from 5% to 30%, depending on the severity of the outbreak and the age and breed of the affected birds. Diagnosing AE can be challenging, as the symptoms are similar to those of other neurological diseases. Laboratory tests such as virus isolation and serology can be used to confirm the presence of the virus. In some cases, post-mortem examination of affected birds may be necessary to confirm the diagnosis. Preventing of AE requires implementing strict biosecurity measures, such as regularly cleaning and disinfecting facilities and equipment, restricting access to the flock, and controlling movement of personnel and vehicles on and off the premises. Vaccination is also an effective means of preventing AE. The vaccine is administered via injection. Treatment of AE is generally supportive, as there is no specific antiviral therapy available. Affected birds should be isolated from the rest of the flock and provided with supportive care, including adequate nutrition, hydration, and temperature control. However, the economic impact of the disease can be mitigated through early detection and prompt implementation of control measures [9,10].

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