



Infectious Bursal Disease (IBD, Gumboro Disease)

Cause

The disease is caused by a birna virus of serotype 1. Virus strains can be divided in classical and variant strains. The virus is very stable and is difficult to eradicate from an infected farm.

Transmission

IBD virus is very infectious and spreads easily from bird to bird by way of droppings. Infected clothing and equipment are means of transmission between farms.

Species affected

Chickens and turkeys appear to be natural hosts.

Clinical signs

Clinical IBD occurs usually between 4 and 8 weeks of age. Affected birds are listless and depressed, pale and huddling. Mortality varies. Usually new cases of IBD have a mortality rate of about 5 to 10% but can be as high as 60% depending on the pathogenicity of the strain involved. In subsequent infection on the same farm, mortality is lower and eventually, with successive attacks, there is no mortality noted.

The subclinical form caused by the immunosuppressive effect of the IBD virus is now of more economic importance in that

the immune system of the bird is damaged. Gumboro disease related diseases such as inclusion body hepatitis are more frequent in these birds. In broilers this form of the disease results in bad performance with lower weight gains and higher feed conversion ratios.

Diagnosis

In acute cases the bursa of Fabricius is enlarged and gelatinous, sometimes even bloody. Muscle haemorrhages and pale kidneys can be seen. Infection by variant strains is usually accompanied by a fast bursal atrophy (in 24-48 hours) without the typical signs of Gumboro disease. Also in chronic cases the bursa is smaller than normal (atrophy). The bursa destruction is apparent on histologic examination. The lack of white blood cells (lymphocytes) results in a reduction in the development of immunity and decreased resistance of the birds to other infections. Typical signs and lesions are diagnostic of IBD. Histopathological examination, serology and/or virus isolation are helpful tools. IBD can be confused with sulfonamide poisoning, aflatoxicosis, and pale bird syndrome (Vitamin E deficiency).

Treatment and control

No treatment is available for IBD. Vaccination of parent breeders and/or young chicks is the best means of control. The induction of a

high maternal immunity in the progeny of vaccinated breeders, together with the vaccination of the offspring is the most effective approach to successful IBD control.