

Infectious Bursal Disease Virus in Chickens

A non-pathogenic infectious bursal disease virus serotype 2 (IBDV2) is present in New Zealand. IBDV2 is not associated with clinical infectious bursal disease (Gumboro Disease).

Clinical Infectious bursal disease virus (Gumboro Disease) causes inflammation followed by atrophy of the bursa of Fabricius with variable degrees of immunosuppression. While morbidity is high, mortality is generally low but can approach 30%. Below is a summary of Clinical Infectious bursal disease virus (Gumboro Disease).

Clinical Signs:

Clinical signs are most severe in birds 3-6 weeks old, but the disease may be seen from 1-16 weeks of age. The younger the bird at the time of infection the more severe the immunosuppression and birds under 3-weeks of age typically only have bursal destruction and immunosuppression.

In older birds, clinical signs may include depression, anorexia, tremors or unsteadiness, ruffled feathers and a droopy appearance (can resemble coccidiosis). Diarrhoea and dehydration are usually present, and birds may void blood and strain during defaecation. Vent picking is common and may be self-inflicted.

Gross lesions include an enlarged bursa of Fabricius due to subserosal oedema and mucosal to transmural petechial haemorrhage. Caseous exudate may be seen in the lumen of some bursae due to necrosis and inflammation. Some birds may present with increased in intestinal mucus.

Lesions in other tissues include petechia and ecchymoses in the thigh and pectoral muscles and sometimes at the junction of the proventriculus and ventriculus, and necrotic lesions in the thymus, Harderian gland, caecal tonsils and Peyer's patches (especially in highly virulent strains). Non-specific changes include splenomegaly, swollen kidneys, and/or urates in the ureters.

Other species that may be affected:

Turkeys and ducks may present with subclinical infections without immunosuppression.

Virus Transmission:

The virus is highly contagious and can spread via fomites and horizontally through infected birds. The incubation period is about 2-3 days.

Diagnosis:

A short course of disease (clinical history) and bursal lesions are suggestive. Confirmation of infection is often done using polymerase chain reaction (PCR), ELISA, agar-gel precipitin or Virus neutralization tests.

If you suspect a case of Infectious Bursal Disease virus collect fresh and fixed bursa of Fabricius samples. As this is a disease of interest, MPI should be contacted (0800 80 99 66).