GUMBORO: POULTRY

Pathology description

Infectious bursal disease (IBD) is caused by a virus that is a member of the genus Avibirnavirus of the family Birnaviridae. Although turkeys, ducks, guinea fowl and ostriches may be infected, clinical disease occurs solely in chickens. Only young birds are clinically affected. Severe acute disease of 3–6-week-old birds is associated with high mortality, but a less acute or subclinical disease is common in 0–3-week-old birds. This can cause secondary problems due to the effect of the virus on the bursa of Fabricius. IBD virus (IBDV) causes lymphoid depletion of the bursa, and if this occurs in the first 2 weeks of life, significant depression of the humoral antibody response may result.

Infectious Bursal Disease (IBD), or Gumboro Disease, is a viral disease affecting young chickens. The disease has a worldwide prevalence. The target organ of the virus is the Bursa of Fabricius, an important organ in the young chickens developing immune system.
The economic impact of an Infectious Bursal Disease Virus (IBDV) infection is twofold:

1. Direct mortality that can reach levels in excess of 40%, and
2. Secondary infections, due to a suboptimal immune system, having a negative impact on production efficiency.

Symptoms

Disease is most common in 3 to 6 weeks old birds, however severe infection occurs in Leghorn up to 18 weeks. One of the earliest signs is for birds to pick at their own vent. Other signs include:

- Infection by opportunist germ which are not normally pathogenic
- Poor body weights and feed conversions
- Reluctance to move
- Depression
- Anorexia
- Ruffled feathers
- Trembling
- Watery diarrhea
- Sudden death

Morbidity rates are high resulting in severe economic losses. Mortality rates of up to 25% in broilers and 60% in layers may occur.

Post Mortem findings

- Cloacal bursa is enlarged, swollen and hemorrhagic in birds dead of the disease and is atrophied in recovered birds
- Dehydrated carcass
- Skeletal muscles dark with haemorrhages (especially thigh and pectoral muscles)
- Thymus opaque with thickened gelatinous capsule
- Bone marrow fatty and yellow or pink
- Liver may be swollen
- Kidneys swollen and fatty
- Increased mucus in the intestines

Costs of the disease

- Increased feed cost
- Mortality
- Less weight gain

Vectors

- **Environment**

  Various animals, particularly cats and rodents, are a common source for the introduction of the organism into commercial poultry. Pasteurella multocida is not a common organism found in feed, water, or litter.

- **Material**

  Contaminated equipment

- **Animal**

  The main source of infection is the birds themselves, which contaminate their own environments. As many domestic poultry species tend to be cannibalistic, carcasses of birds that have died of fowl cholera serve as a source of Pasteurella Multocida to infect the remainder of the flock.

- **Feed and drinking water**:

  Pasteurella multocida is not a common organism found in feed, water

- **Working method**

  Insufficient cleaning

➔ MAIN VECTOR: contaminated birds

Preventive action

- proper rodent control and elimination of contact of poultry with other animals, such as cats, is an important measure for the prevention of the introduction of PM into a poultry flock.
- removal of dead birds from a flock with an active PM infection is an important means of impeding the spread of the infection within a flock.
- Clean the barn properly after every hatch, remove all the feaces

Controlling action

A wide variety of drugs is available for the treatment of fowl cholera, frequent use of drugs has led to widespread drug resistance.

Advised Protocols

For every possible vector, a hygiene protocol must be implemented. See these Specific Purpose Protocol:

PERSONAL HYGIENE

TRANSPORT

HOUSING HYGIENE