

INFECTIOUS BRONCHITIS



**This disease
is known to
occur in
Afghanistan.**



1. Definition

Infectious Bronchitis (IB) is an acute contagious disease of birds, found worldwide, and causing primarily respiratory disease and lowered production.

2. Etiology

A coronavirus, infectious bronchitis virus (IBV), is the causative agent. There are numerous strains, with varying virulence. Some strains specifically target the kidney, causing lesions there.

3. Transmission

Transmission is mostly through contact and aerosol and droplet virus shed through respiratory secretions and feces. Contaminated feed and water, contact with animals or materials, importation of infected chicken or husbandry materials can be sources of infection. Transmission from farm to farm is by movement of contaminated workers, equipments and vehicles. Recovered birds may shed virus for weeks. There is no transmission through eggs.

4. Species affected

Infectious Bronchitis is disease of chicken. All ages of chickens are susceptible to infection, but the severity of disease varies with age.

5. Clinical disease

Incubation period is 36-48 hours. Morbidity approaches 100%. Affected chicks are depressed and tend to huddle near heat source; clinical signs include coughing, snicking, sneezing, rales, nasal discharge, and frothy exudates from the eyes. There is a 5-10% drop in egg production lasting for 10-14 days and eggs may have thin and irregular shells, and watery albumen. Mortality varies, but is often as high as 25%. Secondary infections with other organisms, such as *M. gallisepticum*, can worsen the clinical disease significantly, with more severe respiratory disease and a further drop in egg production. The kidney-targeting strains may cause higher mortality.

6. Pathologic findings

Lesions seen in the respiratory tract include edema, hemorrhages, and perhaps some fibrin in nasal cavity, trachea, and bronchi. Sometimes air sacs are involved as well. Kidney damage may be significant after infection with nephrogenic strains, and they appear pale and swollen, with urate deposits in the kidney and ureters, which may even be occluded. Laying birds may have yolk material in the body cavity and developing eggs in the ovary may be flaccid. Cystic oviduct may be seen in young birds.

7. Diagnosis

Typical clinical signs are highly suggestive of IB. Laboratory diagnosis includes serology or virus isolation. Differential diagnoses include Newcastle disease, Infectious Laryngotracheitis, and Infectious Coryza.

8. Treatment

There is no known treatment for IB.

9. Prevention and Control

Prevention of IB is best achieved through an effective biosecurity program. As a second line of defense, chickens in endemic areas should

be vaccinated with modified live vaccines to provide protection. There is a significant amount of cross protection to heterologous challenge, but choosing vaccines based on the knowledge of the strains present in the region is the most cost effective and efficacious.