

## COMMON DISEASES IN POULTRY

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### General Signs of Disease

- Poor appetite
- Huddling
- Depression
- Runting/stunting
- poor uniformity
- Ruffled feathers
- Coughing, sneezing,
- Oculo-nasal discharge,
- Difficult breathing
- Bloody or wet litter
- Increased mortality

### RANIKHET DISEASE / NEW CASTLE DISEASE

- Others name: **Dayle's disease, Avian distemper, Pneumoencephalitis**
- Viral disease of domestic fowl is characterized by
  - respiratory signs
  - often associated with nervous and digestive disorders
  - high mortality.

### ETIOLOGY

- Paramyxoviridae family virus: *Avian Paromyxovirus-type1 (APMV-I)*

### CLINICAL SIGNS

#### In Adults:

- Opisthotonus (spasm of muscles causing backward arching of head, neck and spine)
- Head of the bird down between legs or straight back side between shoulders.
- Lethargy
- Increased respiration
- Weakness
- Edema around the eyes

- Torticollis (Twisted neck)
- Paralysis of legs
- Greenish diarrhea

#### **In Chicks:**

- Coughing and ratteling,
- Gasping,
- Trembling,
- Lack of coordination,
- Partial or complete paralysis of extremities,
- Muscular tremor,
- Abnormal movement,
- Mortality 100 %

#### **POST MORTEM LESIONS**

- Pin pointed hemorrhages at the tip of proventricular glands
- Hemorrhagic/ diphtheritic ulcers on the intestine
- Enlargement and haemorrhages caecal tonsils

#### **PREVENTION AND CONTROL**

- Disease can be prevented by integrated approach of vaccination, proper management and biosecurity-
- Prophylactic vaccination
- LASOTA-F1 STRAIN VACCINE for 1 to 6 days old chicks (intranasal or intraocular route)
- Repeat LASOTA-F1 vaccine at 4 to 5 weeks age
- Mukteshwar strain (R2B) vaccine at 8-10 weeks (intramuscular / Subcutaneous route).
- A booster dose at 16-18 weeks.

#### **MAREK'S DISEASE**

- Other name: **Range paralysis, Neural leukosis, skin leukosis**
- **Etiology:** Herpes virus
- Marek's Disease is an economically important viral disease but more or less effectively controlled by vaccination.

- It is principally a disease of young chicken but rarely affects other birds also. Chicken below 3 to 4 months are more susceptible.

### **SYMPTOMS**

- Dullness, depression and sudden death in acute form (MD lymphomas).
- Incoordination, staggered gait, paralysis of one or more extremities in classical form (Neural form).
- Unilateral or bilateral blindness with ocular involvement.

### **POST MORTEM LESIONS**

- Tumors (lymphomas) are present in one or more of visceral organs and tissues. Gonads (ovary), liver, spleen, lungs, kidney, skin etc may be involved.
- Tumors cause nodular or diffuse enlargement of the affected organ.
- In classical form, nerves become thickened slightly or as much as 3 or 4 times the normal and becomes rounded instead of the normally striated appearance

### **PREVENTION**

- Preventive vaccination is available.
- Herpes Virus Turkey strain is used in vaccine
- This is live attenuated vaccine
- Naturally occurring mild strains.
- There is no effective treatment.

### **PULLORUM DISEASE/ BACILLARY WHITE DIARRHOEA**

- Fatal septicemia of young chicks (up to 3 weeks of age).
- Transmitted within the egg from carrier hen and usually causing death in incubator or brooder. Occasionally it can cause losses in adult birds, usually brown-shell egg layers.

**Etiology:** *Salmonella pullorum* (non motile Salmonella bacteria)

#### **Hosts:**

- It affects chickens most commonly, but also infects turkeys, game birds, guinea fowls, sparrows, parrots, ring doves, ostriches and peafowl.
- Broilers are more susceptible to the disease.
- It is a disease of newly hatched chicks.
- If they get infection after hatching they show symptoms about 10 days post infection, upto the age of 3 weeks.

### **CLINICAL SIGNS**

- Somnolence (state of drowsiness or strong desire to fall a sleep)
- Weakness
- Loss of appetite
- Chalky white diarrhoea
- Stained greenish brown(sometimes) in and around vent

### TREATMENT

- Nitrofurantoin or Furazolidone may be used at the rate of 100 gm per tone of feed for two weeks or till mortality stops
- Use of lactose in a diet of chicks at the rate of 2.5 % in drinking water is reported to reduce salmonella colonization in the intestine of chicks.
- Supportive therapy
- Trimethoprim and sulphadiazine, ampicillin and other higher antibiotics may be tried.
- However, it is better to eradicate the disease by testing the birds and sacrificing the positive and doubtful birds.

### COCCIDIOSIS

- It is a serious protozoan disease of young stock upto 10 weeks of age.
- It is most common in birds reared in deep litter system.
- Disease outbreak occurs in warm and humid climate and damp condition.
- Etiology:
- It is mainly caused by
  - *Eimeria tenella* (caecal coccidiosis)
  - *Eimeria necatrix* (intestinal coccidiosis).

### Transmission:

- Coccidia are almost universally present in poultry-raising operations, but clinical disease occurs only after ingestion of relatively large numbers of sporulated oocysts by susceptible birds.
- Both clinically infected and recovered birds shed oocysts in their droppings, which contaminate feed, dust, water, litter, and soil.
- Oocysts may be transmitted by mechanical carriers (eg, equipment, clothing, insects, farm workers, and other animals).

### Hosts:

- Coccidia are found in almost all the chickens.

### Signs and symptoms:

- Depression, weakness, ruffled feathers.
- Reduced feed intake.
- **Bloody diarrhoea**, soiling of vent.
- Loss of body condition.
- Poor egg production.
- Pale comb and wattles due to anemia.
- Death.

### Diagnosis:

- Based on symptoms such as **bloody diarrhoea**.
- Postmortem lesion: **Haemorrhages** in caecum and intestine.
- Faecal examination reveals presence of **oocysts in faeces**.

### Treatment

- Administration of anti-coccidial drugs like-
  - Bifuran tablet @ 1 tab/ lit of drinking water for 7 days.
  - Amprosol powder (20%) @ 60 gms / 50 lit of water for 7 days.
- Vimeral liquid @ 2 ml/ lit of drinking water.

### Prevention and control:

- Isolation and treatment of affected birds.
- Use of proper waterers and feeders.
- Use of dry litter or regular changing of litter.
- Provide good ventilation and sunlight in poultry houses.
- Use anti-coccidial drugs as control measures.
- Vaccination- Commercial vaccines consist of live, sporulated oocysts of the various coccidial species administered at low doses. Modern anticoccidial vaccines should be given to day-old chicks, either at the hatchery or on the farm.