

# 1-Fowl Cholera (F.C).

\***Definition:** it is a **contagious disease** appears as a septicemic disease, with **high morbidity and mortality**, but chronic conditions often occur, the disease more prevalent in late summer and winter.

\***Etiology:** it is caused by **Pasteurella multocida**, G-, not motile, non-spore-forming, it appear **bipolar** in tissue and **blood culture**.

## \***Synonyms**

Avian cholera, avian hemorrhagic septicemia, avian pasteurellosis.

## \***Transmission:-**

1-Most species of **farm animals** maybe **carrier**.

2-Contaminated **equipments** and feed bags are **source of infection**.

3-**Carcass** of birds that die of acute FC may serve as infection source.

4-**Sparrow, pigeon, rats, insect** may serve as infection source, carried organisms without clinical signs.

5-The microorganism live in **upper respiratory tract** of healthy birds, in presence of some **stress** factor such as **climate changes**, sudden change in management.

6-Spread the disease in flock is primarily **excretion** microorganism from **mouth** of infected bird, which **contaminate food and water**.

## \***Clinical Signs:**

The disease can be occur in **2 form:-**

**1-Acute form:** the signs of infection for **only few hours** before the death into

**2days, the signs include:-**

1-Fever.

2-Anorexia.

3-Ruffled feather.

4-**Mucous discharge from mouth**.

5-Diarrhea and increase respiratory rate.

6- **Cyanosis** often occur immediately before the death is most evident in unfeather areas of head such as **comb and wattles**.

7-The fecal material is initially watery and whitish in color but later become greenish and contain mucus.

8-Bird that survive are **emaciated and dehydrated** and may be become chronically or may recover.

## **2-Chronic form:**

\*The signs generally are related in **localized infections**, wattles, **sinuses** and legs or wings joint, foot pads and sternal bursa often become swollen.

\*Exudative conjunctivitis, pharyngeal lesions, **torticollis** (localized organism in middle ear), Tracheal rales, dyspnea.

\*The infected bird may remain infected for long period or recover.

## **\*Gross lesion:-**

**1-Acute form:** most of postmortem are associated with **vascular disturbances (general hyperemia):**

1-**hyperemia** of the **abdominal viscera** and may be pronounced in small vessels of **duodenal mucosa**.

2-**Subpericardial hemorrhage** is common with increase of **pericardial fluid**.

3-Hemorrhage of lung and abdominal and **coronary fat** and intestinal mucosa.

4-**Liver** may be swelling with multiple **necrosis foci**.

**2-chronic form:** is characterized by **localized infections** and the nature of disease is **suppurative:-**

\***Yellowish caseous exudates** in air spaces including respiratory tract and **sinuses**, pneumonia is commonly in turkey.

\*Localized infections may also involve **facial edema**, **middle ear** and **meninges**, hock joint, **foot pads**, peritoneal cavity, **oviduct**.

## **\*Microscopic lesions:-**

### **1-Acute form:**

1-**Hemorrhage** and intra vascular clotting, focal area of **coagulative necrosis** in **liver** with **heterophilic infiltration** in **lung** and certain other parenchymal tissues.

2-**Ovary** of the laying hens is commonly affected, **mature follicles** often appear flaccid, thecal blood vessels are less evident, **yolk material** from rapture follicle may be found **in peritoneal cavity**.

3-hyperemia of **ovary and immature follicle**.

**2-chronic form:**

**1-Heterophilic infiltration** and **fibrin** observed in the **air space, middle ear** and **meninges**.

**2-Multinuclear giant cells** often associated with necrotic masses of heterophils in air spaces.

**\*Diagnosis:-**

1-Case history.

2-Necropsy finding.

3-Isolation of bacteria from blood or internal viscera **except (respiratory organ** because the pasteurella present normally in respiratory tract).

**\*Treatment:-**

1-Sulfonamides .

2-Antibiotic like oxytetracycline or streptomycin as **bacteriocidal**.