

Dr. harith



poultry diseases 1 fourth stage



Infectious Coryza+Fowl Cholera+Avian Spirochetosis

Dr.Harith Abdulla
Department of Pathology and Poultry
Disease
College of veterinary medicine
university of basrah

Infectious Coryza

Definition:

Acute severe catarrhal inflammation of the mucous membranes of the upper respiratory tract.

Chronic form is also found.

Etiology:

Avibacterium paragallinarum (formerly *Haemophilus paragallinarum*) features include being a Gram-negative a bipolar staining

This characteristic refers to the organism's appearance under a microscope when stained, where the poles (ends) of the bacterial cells stain more intensely than the center.

Susceptibility: Chickens only

Chickens(14) weeks of age and older are most susceptible.

Synonyms:

Coryza, Roup, Cold.

Epizootiology:

- 1– Transmission through carrier.
 - 2– Contact.
 - 3– Contaminated water and feed.
- 

Symptoms: Acute

- 1–Rapid onset and rapid spread.
 - 2–Thin watery discharge from nostrils becomes thick and sticky, with an offensive odor.
The discharge becomes drying yellowish crusts around the nasal openings.
 - 3–Sinuses filled with mucous, the mucous becomes dry cheesy causes bulging about the eye(Ocular Roup).
 - 4– Rattling noises.
 - 5– Sneezing, coughing and swollen face and wattles.
 - 6–Affected birds shake their heads to get rid of mucous.
- 

Symptoms:Chronic

- ▶ 1-persistent facial swelling, especially around the eyes, which can be so severe that it causes the eyes to close.
 - ▶ 2- Other signs are ongoing nasal and ocular discharge, a chronic cough or rales (gurgling sounds), and reduced activity, often accompanied by a drop in feed consumption and egg production.
 - ▶ 3-The chronic nature of the illness can be due to secondary infections that prevent recovery,
- 

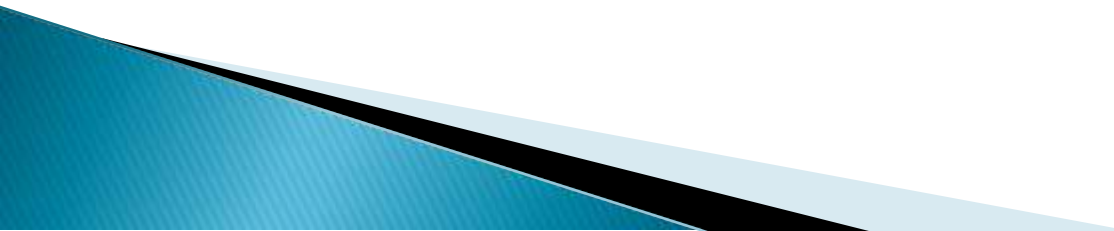
Post –mortem lesions:

Acute:

- 1-Acute catarrhal inflammation of mucous membranes of the nasal passages and sinuses.
- 2- Catarrhal conjunctivitis.
- 3-Subcutaneous edema of the face and wattles.

Chronic:

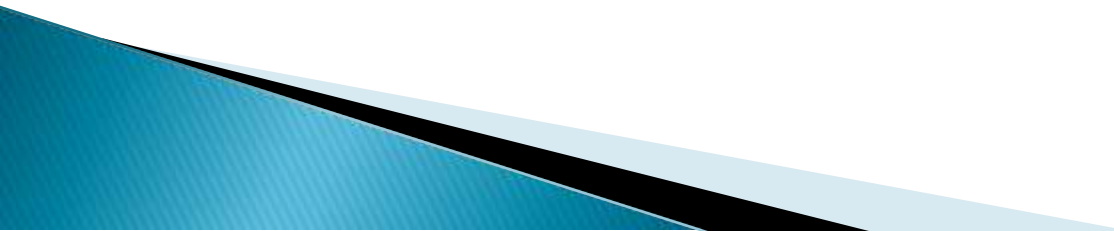
Caseous exudates in the sinuses, nasal passages and conjunctival sacs.



Histopathology:

- 1-Sloughing and hyperplasia of the mucosal and glandular membrane.
- 2-Heterophilic infiltration of upper respiratory tract.

Diagnosis:

- 1-History.
 - 2-Symptoms: Particularly bad odor of exudates.
- 

Differential Diagnosis:

- 1–Fowl Pox : Yellowish patches in the throat :
Are easily removed in Roup , while in Pox they are adhered to the lower layer.
- 2–Chronic Fowl Cholera.
- 3–Vitamin A Deficiency .
- 4–CRD.

Treatment:
Sulfathiazole.

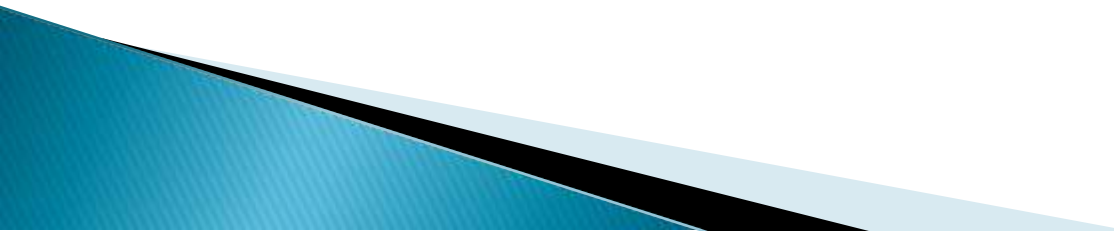
Fowl Cholera(Pasteurellosis)

- ▶ Definition:
- ▶ Fowl cholera is an acute septicemic disease of
- ▶ domestic fowl and wild birds caused by
- ▶ *Pasteurella multocida* (formerly known as *Pasteurella aviseptica* in fowl) is a small, Gram-negative coccobacillus that typically exhibits bipolar staining, characterized by high morbidity and mortality
- ▶ **Synonyms:**
- ▶ 1-Avian Cholera.
- ▶ 2-Avian Pasteurellosis.
- ▶ 3-Avian Hemorrhagic Septicemia.

Susceptibility:

Chickens, turkeys and ducks are most commonly affected.

Epizootiology:

- 1-Healthy nasal carriers provide a source of infection.
 - 2-The natural spread of the disease is by ingestion and inhalation.
 - 3-Mechanical transmission by vectors.
- 

Clinical signs:

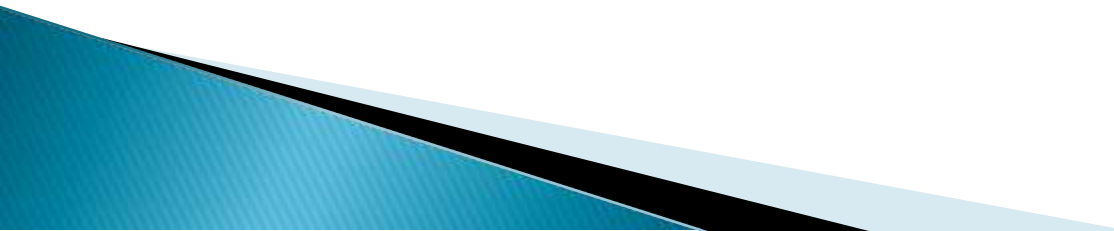
- ▶ 1- **Age**: Semimature to mature.
- ▶ 2- **Acute**:
 - a-Sudden death of well-fleshed birds.
 - ▶ b-Greenish and yellowish diarrhea.
 - ▶ c- Mucous in the mouth and nostrils.
 - ▶ d- Cyanotic comb and wattles.
- ▶ 3- **Chronic**:
 - a-Carriers due to localization of the bacteria.
 - ▶ b-Swollen wattles and eyes.
 - ▶ c- Inflammation of joints and tendons sheath of legs and wings.
 - ▶ d- Torticollis.

Post-mortem lesions:

Acute:

- a- A sticky mucous in the mouth and nasal passages.
- b- Generalized congestion.
- C- Hemorrhage in the heart muscles, particularly around the coronary groove and gizzard.
- d- Pericardial sac contains an excess of yellowish fluid.
- E-Liver: very dark or lighter than usual, with many white necrotic foci.
- f-Inflammation and hemorrhage in the duodenum.
- g- Lung: Consolidation and congestion with small hemorrhage .
- h- Cheesy , yellowish deposits in various parts of the body, especially on the air sacs and intestine.

Chronic type:

- a-Dried cheesy, yellow material is found free in the abdominal cavity or adhere to some organ due to ruptured yolk.
 - b-Hemorrhage of the ovary . Ova: Soft, flabby, irregular in outline and pedunculated . Greenish colored ovum is observed.(Due to salpingitis).
 - C- Caseous swollen wattles and joints.
 - d- Suppurative meningitis due to the localization of bacteria at the base of skull, ear and brain.
- 

Histopathology:

- 1-Coagulation necrosis.
- 2-Heterophilic infiltration.

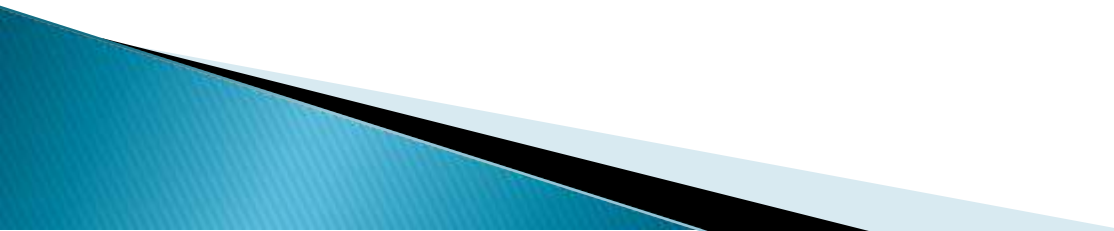
Diagnosis:

- 1-History. 2-Signs. 3-Lesions.
 - 4-Laboratory diagnosis.
 - a-Finding of bipolar bacteria.
 - b- Isolation and characterization of bacteria from circulatory blood, liver and other organs.
 - c- Agglutination test.
 - d- Laboratory animal inoculation (chick and mice).
- 

Control:

- 1-Water sanitation.
- 2- Good management.
- 3-Control flies and rodents.
- 4-Vaccination at 12-16 weeks and repeat 4-8 weeks later.

Treatment:

- 1-Sulfanomides.
 - 2-Teramycin in water or feed.
- 

Field Differential Diagnosis:

	Pullorum	Fowl Typhoid	Fowl Cholera
Comb and wattles	Pale	Pale	Cyanotic
Joints	Normal	Normal	Swollen
Liver size	Enlarged 2-3	Enlarged 2-3	Normal to slightly enlarged
Liver color	Red	Bronzy	Red
Necrotic foci in the liver	+	+	++
Spleen size	Enlarged 2-3	Enlarged 2-3	Normal
Heart	Nodules	Nodules	Hemorrhagic
Ceca	Core	Core	Inflammation and hemorrhage

Avian Spirochetosis

- ▶ It is a tick-borne, non-relapsing disease in avian species, including chickens, turkeys, pheasants, geese, and ducks. The disease is usually an acute septicemia characterized by variable morbidity and high mortality.
- ▶ The causal organism is *Borrelia anserina*, is an actively motile spirochete.
- ▶ Occurrence of spirochetosis corresponds with the subtropical and tropical distribution of fowl ticks in the genus *Argas*, which serve as both the reservoir and primary vector.

The picture can't be displayed.

Clinical signs

Signs are highly variable, depending on the virulence of the spirochete, and may be absent.

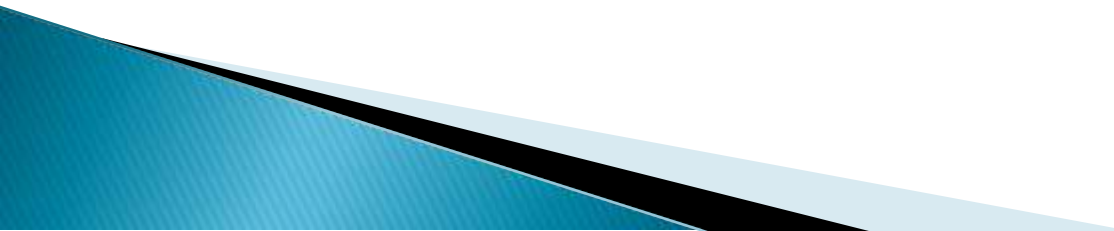
Signs include :

- 1–Listlessness.
- 2–Depression. 3–Somnolence.
- 4–Moderate to marked shivering.
- 5–Increased thirst.
- 6– Inappetence can lead to reduced weight.
- 7–Anemia is common.
- 8–Death occurs most often 1–3 days after *Borrelia* disappear from the blood stream.

Dr. harith

Young birds are affected more severely than older ones. During the initial stages of the disease, there is usually a green or yellow diarrhea with increased urates. The course of the disease is 1-2 weeks. Morbidity can approach 100% and mortality may be 33-77%. Egg production in layers or breeders may be reduced by 5-10% with a higher number of small eggs.

Post-mortem lesions:

- 1-An enlarged spleen with petechial or ecchymotic hemorrhages.
 - 2- A grossly enlarged spleen with mottling due to subcapsular hemorrhage is the predominant and characteristic lesion.
 - 3- Focal necrotic hepatitis may also be present.
- 

Dr. harith Diagnosis:

- 1-Demonstration of *Borrelia* in the blood.
- 2-Serological test.
- 3-Signs.
- 4-Lesions.

Treatment:

Several antibacterial agents are effective .The most widely used are pencillin derivatives, but the streptomycins, tetracyclines , and tylosin are also effective.

Control

- 1- A combination of tick eradication and immunization is the most effective means of control.
- 2-Vaccines.