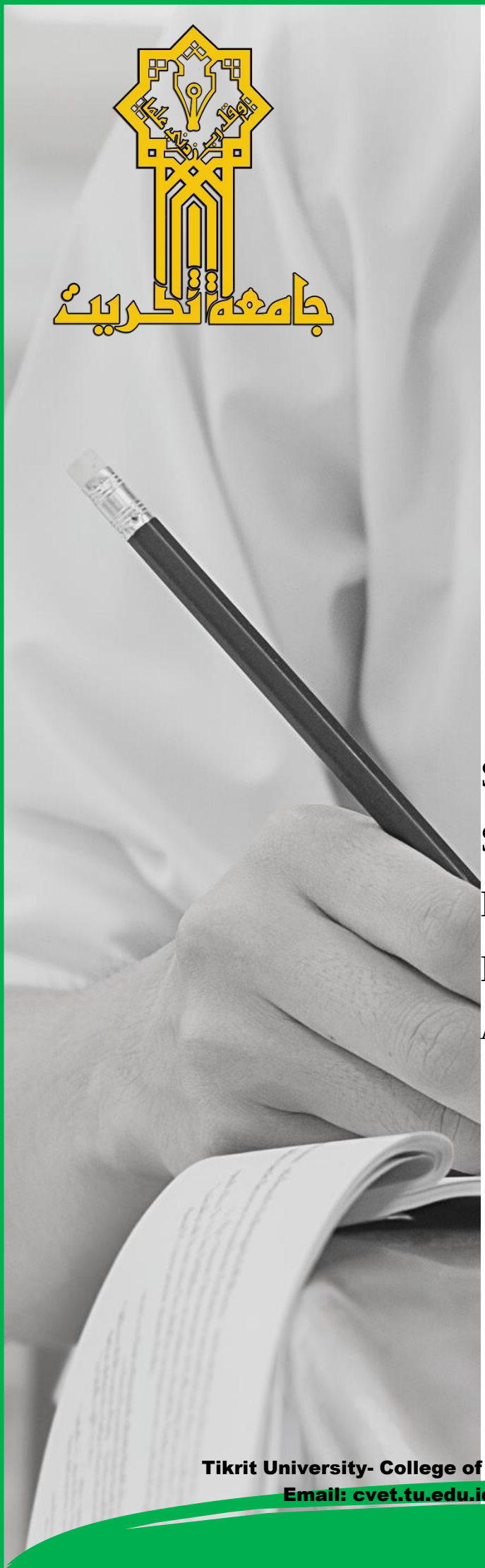

Tikrit University
College of Veterinary Medicine

Infectious Laryngotracheitis and Chlamydiosis

Subject name: Poultry diseases

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SCAN ME

Infectious Laryngotracheitis (LT & ILT)

Definition:

Infectious laryngotracheitis (ILT) is an acute viral disease of chickens, Pheasants and peafowl characterized by marked dyspnea, coughing, gasping, with bloody exudate.

Etiology:

This disease is caused by double strainded DNA virus called ***Gallid herpes virus*** belonging to family ***Herpes viridae***, subfamily ***Alpha herpes virinae***. This virus surrounded by envelope of lipid substance and can be propagated on CAM (Chorio alloantoic membrane).

Incubation period:

The incubation period varies from 4 to 12 days.

Susceptibility:

Chickens and pheasants are natural hosts for **ILT**.

Transmission:

1.The infection occurs from bird to bird by the respiratory route.

2.Also may it occur by contaminated equipment, shoes, clothing, egg boxes and cages.

Clinical signs:

1. Watery eyes and conjunctivitis.

2. Coughing, sneezing, wheezing ,gurgling sound and shaking of the head to disposed exudate plugs in the trachea follow.

3. Many birds die because asphyxiation because present the blood- mucus exudates inside the trachea.

4. Affected chickens extend their head and neck to facilitate breathing.

5. Egg production is reduced.

P.M. lesions:

1.Tracheae are inflamed with excessive the mucus and blood on the tracheal lumen.

2. Air sacs opaque , thickened and contain blood or fluid.

3.Present cheesy material in the trachea which may lead to block the passage and cause asphyxiation.

Histopathology

Laryngotracheitis is characterized by the development of pathognomonic intranuclear inclusion bodies in respiratory epithelial cells. Intranuclear inclusion bodies may be detected in tissues stained with Giemsa or Hematoxylin and Eosin.

Diagnosis:

1.Clinical signs and necropsy findings

2. Microscopic examination for detection present the intranuclear inclusion bodies in the epithelium (cell lining) of the trachea.

3.The fluorescent antibody technique may be used to demonstrate ILT antigen in respiratory mucosa.

4. ELISA.

Differential diagnosis:

ILT must be differentiated from other viral respiratory infections such as Newcastle disease , Avian Influenza,Wet Pox form, Infectious Bronchitis and Mycoplasmosis.

Treatment:

1.Administer antibiotics to control secondary infection.

2. Vaccination by the eye-drop route is suggested.

3. In case of expensive birds, use a swab to remove any tracheal plugs from gasping birds, and vaccinate by the eye-drop method.

Prevention:

1- Using live attenuated vaccine in endemic areas after 10 weeks of age by eye drop or aerosol spray.

2- Birds that have recovered from ILT, should not be added to flocks of susceptible birds because of their carrier state.

Chlamydiosis

Definition:

Avian chlamydiosis is a systemic, bacterial infection caused by ***Chlamydia psittaci***. Among poultry, turkeys and ducks are more susceptible than chickens. The disease varies from asymptomatic to high morbidity and mortality.

Synonyms: Ornithosis, Psittacosis, Parrot fever.

Etiology:

The causative agent gram negative bacteria ***Chlamydia psittaci*** .

Pathogenesis:

The organism enter the blood through inhalation or from the contaminated food and water or by intermediate host like lice and mites, Its transfer through blood stream until arrived to the air sac, liver, kidney , spleen and pericardium, at last appear clinical signs.

Susceptibility:

Turkeys, Pigeons, Ducks, Psittacine and many other bird species especially older and immunosuppressed individuals who are at a higher risk.. Chickens are not commonly affected.

Transmission:

1.The primary transmission is through inhalation air contamination by causative agent.

2. Transmitted by contaminated clothing and farm equipment's.

3.Recovered birds remain carriers with continue to intermittently shed the infective agent.

Clinical signs:

1.Clinical signs which include nasal-ocular discharge.

2. Sinusitis, diarrhea, weakness, loss of body weight because reduction in feed consumption.

3.In turkeys appear respiratory distress with greenish to yellowish colored exudates from mouth and nostrils.

P.M. lesions:

1.Percariditis, airsacculitis with clouding air sac and enlargement of the liver and spleen.

2.In pigeons and other birds may be showed splenomegaly and hepatomegaly.

Diagnosis:

1- Chlamydiosis is diagnosed by isolation and identification of Chlamydia psittaci in cell cultures or embryonating chicken eggs.

2- Take the smears from liver, air sac or pericardium which stained with Giemsa staining used for detection of intracytoplasmic bodies which has reddish color in the cytoplasm of infected cells.

Differential diagnosis:

Fowl cholera, Newcastle disease, Avian influenza, Infectious bronchitis, Swollen head syndrome , Mycoplasmosis and Colibacilosis .

Treatment:

Chlortetracycline can be given in the feed (200-400 g/ton) for 3 weeks.

Prevention:

There is no vaccine. Have a good biosecurity program, excluding wild birds as much as possible.

Omphalitis (MCD)

Definition:

Its refers to(an inflammation of the navel) improper closure of the navel with subsequent bacterial infection.

Anther names:

Navel ill , Mushy Chick Disease (MCD).

Etiology:

This problem resulted from mixed bacterial infections including ***Staphylococcus, Streptococcus, Proteus, E.coli*** and others Causes. Omphalitis can usually be traced to faulty incubation, poor hatchery sanitation or chilling /overheating soon after hatching .

Transmission:

1.Omphalitis occurs during the first 10 days of life.

2.Its transmitted from unsanitary equipment in the hatchery to newly hatched birds having unhealed navels.

3. Contaminations the feed and water by fecal material.

Clinical signs and P .M. lesions:-

1.Affected chicks showed dullness and loose of appetite.

2.Diarrhea, with present pasted vent .

3. The characteristic lesions don't healed navels, subcutaneous edema, bluish color of the abdominal muscles around the navel found a putrid odor with peritonitis.

4.May showed present fibrin deposits on abdominal viscera.

Diagnosis:-

1.Clinical signs and Post Mortem lesions

2. Diagnosis is confirmed by isolation in profuse culture of the bacterial agent and identification.

Prevention:

1.Good management in the hatchery and during the first 10 days following hatching are the only sure ways to prevent Omphalitis.

2. Broad spectrums antibiotics help reduce mortality and stunting , but they don't replace sanitation.

3.In village chickens, eggs should be cleaned before they are given to hens for brooding.