Fungal Diseases

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Etiology: *Aspergillus fumigatus*

Aspergillosis is defined as a disease caused by infection with the genus *Aspergillus*, usually of the respiratory system, of chickens, turkeys, and less frequently ducklings and many other wild birds.

The disease has two forms:

1-Acute form in young birds(Brooder Pneumonia).
2-Chronic form in older birds(Sporadic cases).
Mortality : Up to 100% in young birds.

METHOD OF SPREAD:

A-Inhalation of spores.
B-Contaminated eggs.
C-Dusty litter.

Clinical signs:

1-Rapid gasping respiration.
2-Yellow caseous pellet in eyes.
3-Encephalitis.

POST-MORTEM LESION:

1- Round yellow caseous granulomas on air sacs and lungs.
2-Occlusion of trachea by caseous plaques.
3-Sometimes green mold growth on air sacs or in lungs.

Diagnosis:

1-Case history.
2-Clinical signs.
3-Post-mortem lesions.
4-Histopathology demonstrates the hyphe of the fungi .

Treatment: Antifungal (not practical and not economic).

Prevention:

1-Remove source of infection.

2-Fumigate incubator and hatchers.

3-Add antifungal agent to feed.

4-Fumigate litters.

5-Prevention of stress.

2-Thrush:

A disease of the alimentary tract of chickens, turkeys, and sometimes other birds and mammals, characterised by thickening and white plaques on the mucosa, especially in the crop but sometimes in the proventriculus, intestine and cloaca, and associated with gizzard erosion

The cause is a fungal yeast, *Candida albicans* and

the condition is seen worldwide.

Morbidity and mortality are usually low.

3–Favus:

Favus is a fungal infection in chickens caused by *Trichophyton megnini*. It primarily affects the skin, especially on the comb, wattles, and face.

✓ Mode of Transmission

~ Spread through direct contact with infected birds

~ Contaminated equipment or environment

~ Often worsens in damp, dirty, and overcrowded conditions

Signs and Symptoms (for labeling a picture)

~ White powdery patches on comb, wattles, or around eyes

~ Scabby, crusty skin lesions

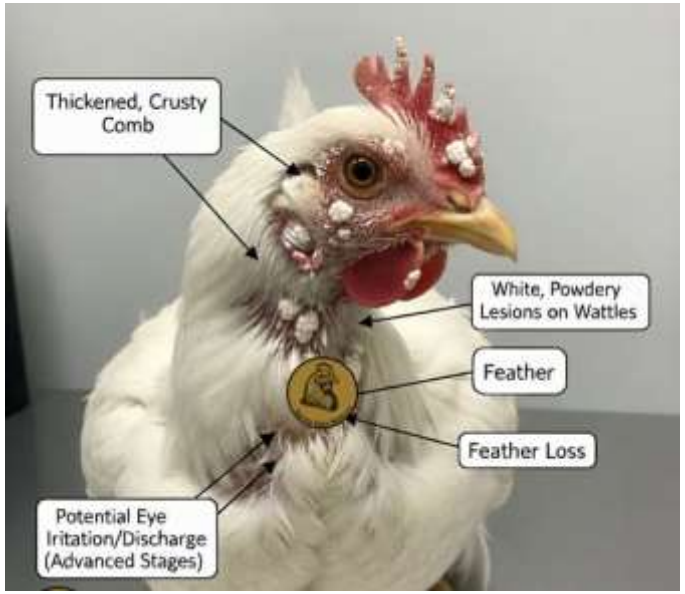
~ Thickened, wrinkled skin in infected areas

~ Feather loss around face and neck

~ Dry, brittle feathers

~ Itching and scratching

~ Weight loss or reduced appetite (if severe)



Treatment

~ Isolate infected birds

~ Apply topical antifungal creams (e.g., clotrimazole or miconazole)

~ Disinfect coop and equipment

~ Improve ventilation and hygiene

~ Boost immune system with vitamins (esp. A & E)

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Mycotoxicosis

Mycotoxicosis refers to all of those diseases caused by the effects of toxins produced by molds.

Diseases are often subclinical and may be difficult to be diagnosed. Problems occur in high temperature and humidity .

Mortality is variable.

Types:

Aflatoxins produced by Aspergillus flavus. T2 fusariotoxins by *Fusarium* spp.(mouth lesions and thin eggshells);

Ochratoxins by Aspergillus ochraceus (interferes with functions of kidney, proventriculus and gizzard);

Rubratoxin by Penicillium rubrum(interferes with thiamine metabolism and causes symptoms of deficiency).

Other mycotoxins.

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1-Ingestion of fungal spores, which are readily carried in the air.

2-High grain humidity.

3- Damage due to insects.

4-Poor storage condition.

Signs

-Signs vary with the poultry species, the type of mycotoxin, the dose ingested and the period of exposure.

1-Diarrhea.

2-Paralysis or incoordination.

3-Reduced feed efficiency.

4-Reduced weight gain or egg production /hatchability.

5-Pale shanks and combs.

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:Post-mortem lesions

1-Mycotoxins can cause damage to mucosa .

2-Petechiae and larger hemorrhages in various tissues.
3-Livers may be enlarged and fatty or show bile retention or tumors growth.
4-Enteritis of variable degree may be seen.
5-Hydropericardium.
6-Pale bone marrow.
7-Regression of the bursa of Fabricus.
8-Gizzard erosions.

:Diagnosis

1-History, signs and lesions.
2-Histology may be beneficial in some cases.

Differential diagnosis:

1-Poor nutrition.
2-Poor management.
3-Physical damage to tissues.
4-Infectious Bursal Disease.

Treatment:

1-Removal of the source of toxins.

2-Addition of antifungal feed preservatives.

3-Increasing protein level in the feed until mortality reduces.

4-Administration of soluble vitamins and selenium.

Prevention:

1-Careful choice of feed raw material ,reduction in water content of the raw materials and hygienic storage.

2-Antimycotic feed additives.

3-Certain minerals additives.

4- Management of feeders , and avoidance of feed spoilage .