



poultry diseases fourth stage



Manganese Deficiency, Gout, , fatty Liver and Kidney Syndrome (FLKS), Ascites

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

Manganese Deficiency (Perosis)

Manganese :

Chickens require adequate levels of manganese in their diet for reproduction and development (formation of healthy cartilage and bone), egg shell formation, wound healing, nutrient absorption, and for preventing perosis.

Symptoms:

- 1–Age : 3 –5 weeks.
- 2–The affected number in the flock is low.
- 3–Excellent appetite.

Post-mortem lesions:

- 1–Puff off the hock, hemorrhage and serum around the hock joint.
- 2–Slipped tendon.

Diagnosis:

- 1–Slipped tendon.
- 2–No nerve involvement.
- 3–The shortened limbs and parrot beak are typical effects of manganese deficiency upon embryo.

Differential diagnosis:

Character	Rickets	Perosis
Appetite	Poor	Good
Feathers	Rough	Normal
Bones	Rubbery	Hard
Tendon	Normal	Slipped
Beak	Rubbery	Normal
Puffy hock	Yes	Yes

Gout :(Uremic poisoning)

Is a nutritional disease characterized by deposits of sodium urates. It occurs in two forms, visceral and articular gout. In both the forms, deposits consist of chalky white materials. Visceral gout is considered to be an acute form and is more insidious and difficult to detect in early stages or in live birds.

Etiology:

- 1 – High protein diets.
- 2 – Vitamin A deficiency.
- 3 – Abnormality which impairs kidney function.
- 4 – Insufficient water intake .

Symptoms:

- 1 – Age : Any age .
- 2 – Forms: Articular form, Visceral form.

Lesions:

- 1 – Sodium urates may deposit in any visceral organ.
- 2 – Kidneys are enlarged, light in color, and spotted with urates.
- 3 – The ureters are enlarged and packed with urates.
- 4 – The heart is often affected.

Prevention:

- 1 –Plenty of water.
- 2–Low protein diet.

Fatty Liver and Kidney Syndrome (FLKS)

Fatty Liver and Kidney Syndrome (FLKS) in young flocks : Is a manifestation of a failed metabolic process allowing accumulation of fat in the liver and kidneys.

Fatty liver in adult poultry flocks is commonly caused by the inadequate addition of biotin and/or choline chloride in the feed.

Morbidity: Occurs rapidly in affected chickens and is followed quickly by death.

Mortality : May vary from 5–35% .

Clinical signs:

- 1–The bird is , isolated and often die in a sitting position.
- 2–Incoordination.
- 3–Head movement.
- 4–The chicks may lie on their breast with their neck and legs extended.

Post-mortem lesions:

- 1–The liver and kidney are markedly enlarged, pale and fatty. The liver may be yellow.
- 2– Abnormal deposits of fat in the subcutaneous tissues, abdominal cavity and visceral organs.
- 3–Weights and sizes of liver, kidney and heart increased, whereas the weight of thymus decreased.
- 4–The liver is very fragile and easily ruptured causing internal bleeding.



DR. HARITH

Treatment:

Biotin via the drinking water.

Ascites

Ascites is a disease of broiler chickens occurs especially at high altitude characterized by an accumulation of transudate in the peritoneal cavity or pericardial sac. The fluid, may contain yellow protein clots.

Synonyms:

- ▶ B.P.H.S. [Broiler Pulmonary Hypertension Syndrome] .
- ▶ High Altitude Disease.
- ▶ Edema Disease.
- ▶ Heart Failure Syndrome.
- ▶ Dropsy .

Predisposing factors includes:

- 1 – Reduced ventilation.
- 2 – High altitude.
- 3 – Respiratory disease.

Morbidity: Is usually 1–5% .

Mortality: 1–2% but can be 30% at high altitude.

Clinical signs:

- 1–Sudden death in rapidly developing birds.
- 2–Poor development.
- 3–Progressive weakness and abdominal distension.
- 4–Recumbency.
- 5–Dyspnea.
- 6–Possibly cyanosis.

Post-mortem lesions:

1. Thickening of right-side myocardium.
2. Dilation of the ventricle.
3. Thickening of atrioventricular valve.
4. Generalized congestion.
5. Liver enlargement.
6. Spleen is small.
7. Pericardial effusion.



DR. HARITH

Microscopic changes:

Cartilage nodules are increased in lung.

Diagnosis

1–Signs.

2–Lesions: Gross pathology is characteristic.

3–Cardiac specific protein (Troponin T)
may be measured in the blood.

Differential diagnosis:

- 1–Broiler Sudden Death Syndrome .
- 2–Bacterial endocarditis.

Treatment:

- 1–Improve ventilation.
- 2–Vitamin C .

:Prevention

- 1–Good ventilation (during incubation and chick transport).**
- 2– Avoid any genetic tendency.**
- 3– Control respiratory diseases.**