

Enterotoxaemia (Pulpy kidney, Over eating disease)

Definition: It is highly significant and costly disease in sheep industry, and it is a fatal toxemic disease of sheep, goats, and rarely cattle. The disease is manifested by sudden death especially in lambs or manifested by diarrhea, involuntary contraction of muscles, paralysis. Its occurs after a sudden change to a better, more nutritious diet. The disease affected sheep of all ages but is most common in lambs under 6 weeks of age.

Cause: *Clostridium perfringens* Type D. The bacteria are present in soil and in the intestine. Under certain circumstance *Cl. Perfringens* multiply and produce powerful toxin.

Condition that bring about enterotoxaemia:

- 1- Changing feed suddenly.
- 2- Feeding irregularly.
- 3- Increasing the grain content of ration too rapidly.
- 4- Heavy tape worm infestation favors the accumulation of toxin and occurrence of the disease.

Clinical signs:

Per acute stage: sudden death.

Acute stage:

- 1- Frothy salivation.
- 2- Green or pasty diarrhea.
- 3- Muscular convulsions.
- 4- Nervous signs.
- 5- Staggering.
- 6- Recumbancy.
- 7- Coma and death.

Pathogenesis: *Clostridium perfringens* multiplies in abomasum and intestine. Sudden changes from low to high energy (especially starchy) diets lead to rapid multiplication of *Clostridium perfringens* which produce toxin (epsilon), the toxin damages the endothelium of blood vessels in various organs especially in kidney,

lungs and brain resulting in edema. Brain edema is associated with nervous signs, in addition the toxin may paralyse the vital centers in brain.

Postmortem finding:

Peracute cases: No lesions.

Acute cases:

1. Large amount of clear, straw coloured pericardial fluid.
2. congestion of the abomasal and intestinal mucosa and liver.
3. Diffuse petechial or ecchymotic hemorrhages on serosal surface of abomasum and intestine.
4. Overload of the rumen and abomasum with concentrate food.
5. Petechial haemorrhages of the heart muscle.
6. Soft pulpy kidneys a few hours after death is characteristic of this disease
7. Rapid decomposition of the carcass.

Differential diagnosis:

Sudden death in lambs:

- 1- Pasteurellosis,
- 2- Hypocalcemia and hypomagnesemia (reduced blood calcium and magnesium),
- 3- Polioencephalomalacia (less acute form),
- 4- Acute rumen impaction (no convulsions are present and the course is longer)
- 5- other septicemias.

Adult sheep:

- 1- Rabies.
- 2- Acute lead poisoning
- 3- Pregnancy toxemia.