

## **ENTEROTOXAEMIA**

Enterotoxemia is one of the most common and costly disease problems in the sheep industry and worldwide.

Enterotoxemia also known as **overeating disease** or **pulpy kidney disease** is a condition caused by the absorption of a large amount of toxins from the intestines.

entero = intestine

tox = refers to toxin or poison

emia = refers to blood

entero + tox + emia=intestinal toxin in the blood.

### **AETIOLOGY**

*Clostridium perfringens* type B causes lamb dysentery and enterotoxaemia in goats.

*C. perfringens* type C also causes acute enteritis in lambs.

*Clostridium perfringens* Type D.

The organism is found in the soil and digestive tract of healthy sheep.

*Clostridium perfringens* Type D proliferates in the intestinal contents, in favorable conditions, producing toxins which are highly lethal.

The agent is Gram positive sporforming, non motile, anaerobic bacteria.

## **INCIDENCE**

1. The disease is always associated with those sheep which are in the best and most favored condition.
2. The period of greatest danger is always the few days after the sheep are introduced to an improved diet, such as lush grazing or increased levels of concentrate.

## **CLINICAL SIGNS**

- 1) Sudden death.
- 2) Abdominal pain.
- 3) Coma.
- 4) Respiratory distress.
- 5) Sternal recumbancy making paddling movements with their legs.
- 6) Muscle tremors, or convulsions.
- 7) Frothing of the mouth.
- 8) Grinding of the teeth.
- 9) Diarrhea may also be present.

## **Diagnosis**

- 1) **Case history and clinical sings**
- 2) **Laboratory diagnosis that depend on the:**
  - a) **Large number of *C. perfringens* Type D in the intestine**
  - b) **Type D organism in the kidney and other parenchymatous organ at death.**
  - c) **Epsilon toxin in the small intestine**

**3) Post mortem finding:**

- a) You may see soft pale kidneys; hence the name "pulpy kidney"
- b) The kidneys may also look bloody.
- c) Sometimes you may see gas-filled red intestines.

**TREATMENT**

Treatment of clinically affected animals is useless. But in case of pulpy kidney the following steps should be applied:

- 1) Prevent excessive food intake.
  - 2) Injection with long-acting tetracycline.
  - 3) During outbreak toxoid and antiserum can be administrated at the same time.
- ✓ Administering penicillin or oxytetracyclines or chloramphenicol
  - ✓ Orally administering an antacid.
  - ✓ Administering anti-bloating medication.
  - ✓ Administering thiamin (vitamin B1) I.M.
  - ✓ Replacing fluids I.V or S.C

**Prevention and control:-**

- a) Management which will aid in prevention of the disease includes avoiding sudden changes to the diet. There should be a gradual transition of two to three weeks when going from roughage to a highly concentrated ration.
- b) The feeding of antibiotics will help to prevent enterotoxemia in feedlot lambs.

- c) Vaccination of pregnant sheep and goats 2 months and then 2 weeks before parturition
- ❖ A booster dose should be given annually.

## **BLACK QUARTER (BLACK LEG)**

### **Etiology:**

***Clostridium chauvoei***:-which is a Gram-positive, spore-forming and rod-shaped bacterium.

### **Clinical finding:**

- 1) Stiff gait
- 2) Hot painful swelling of the affected muscles.
- 3) The muscles become oedematous and spongy.
- 4) There may be crepitation.
- 5) Muscles of the legs are the most commonly involved.
- 6) Serous or blood-stained fluid may ooze from the affected areas.
- 7) Fever,
- 8) Lameness,
- 9) The skin over the affected area becomes dark or black
- 10) In later stages the swellings become cold and painless.

## **Diagnosis**

1. Clinical signs (The skin over the affected area becomes dark or black)
2. Pathological features
3. Demonstration of bacteria

## **Treatment**

In early cases large doses of penicillin (10, 000 IU/kg body weight) given I.V may result in recovery

Infiltration of the affected tissues with penicillin may also be effective in early stages of the disease

## **Control**

**Annual vaccination using clostridial vaccines in endemic areas.**