



# Enterotoxemia Overeating Disease

# Enterotoxemia

- Also known as overeating disease
- Pulpy Kidney Disease
- Caused from the massive amounts of absorption of bacterial toxins in the intestines
- Caused from normal bacterial intestines *Clostridium perfringens* types C and D
- Normally found in soil and part of normal microflora of intestines
- Under certain conditions= reproduce rapidly= produce toxins

# Bacterial Toxins

- Released due to increased reproduction of normal intestinal microflora
- Cause enterocolitis (inflammation of intestines)

-increase the permeability of the blood vessels=  
toxins are more readily absorbed into the bloodstream

- Circulation of these toxins cause swelling in lungs and kidneys= Pulpy Kidney Disease

# Susceptibility

- Young animals
- Lambs in feedlots
- Causes sudden and high mortality rates amongst kids and lambs
- Adults develop immunity due to frequent exposure to the toxins

# Causation

- Certain conditions increase the reproduction of the *Clostridium perfringens* type C and D in the gut
- Excessive consumption of milk or feed with grain
- When they are immuno-compromised
- Heavy infestation of intestinal parasites
- Diet rich in grains and low in dry matter (hay or grass)
- Disease that causes slowing of peristalsis

# Causation continued

- When high volumes of starches, sugars, and proteins enter the gut= high growth= increase in toxins

# Symptoms

- Peracute form: sudden death usually after 12 hours
  - Lambs and kids die within hours of showing CNS symptoms e.g. convulsions and excitement
  - Loss of appetite
  - Abdominal discomfort (kicks at sides, etc.)
  - Diarrhea
  - Grinding teeth

# Diagnosis

- Clinical signs or necropsy after sudden death
- Identification of position enterocolitis
  - Isolation of bacteria from feces
  - Isolation from kidney or gut cultures
  - Presence of glucosuria
  - Fluid filled pericardial sac, rumen and abomasum have an abundance of undigested feed,
- Postmortem on large and small intestines:
  - Watery blood
  - Fibrinous clots
  - Ulcers in the mucosa
  - Softening of brain and kidney tissues
  - Specific DNA testing
  - Death of the best conditioned lambs



# Treatment

- Administer penicillin
- Administer C. P. types C and D antitoxin
- Oral administration of an antacid
- Anti-bloating medication
- Banamine
- Probiotic after treatment
- IV

# Prevention

- Vaccinate!
- Before lambing
- Vaccinate young animals about three to four weeks after birth then again 30 days later
- Annual vaccinations
- Feeding strategies
  - Switch slowly
  - Limit grazing time on lush pastures
  - Feed lambs of same size together

# Sources

- <http://www.aces.edu/pubs/docs/U/UNP-0089/UNP-0089.pdf>
- <http://www.ext.colostate.edu/pubs/livestk/08018.html>
- [http://aces.nmsu.edu/sheep/sheep\\_health/enterotoxemia.html](http://aces.nmsu.edu/sheep/sheep_health/enterotoxemia.html)
- <http://www.merckvetmanual.com/mvm/index.jsp?cfile=htm/bc/50714.htm>