

## Article in ABGA Boer Goat Magazine - Sept/Oct 2001

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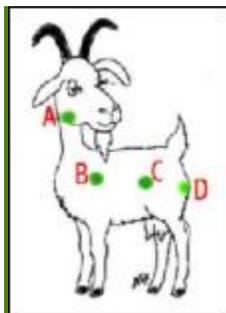
Caseous Lymphadenitis (CL) is a chronic contagious disease affecting mainly sheep and goats. This disease is also called pseudobuberculosis or often "abscesses," and has been referred to as the curse of the goat industry throughout the world.

CL is an infection of goats, caused by *Corynebacterium pseudotuberculosis*. It is also referred to as "abscesses", because of the peripheral swelling, rupture, and drainage of pus from affected lymph nodes. The prevalence of CL in the commercial goat herds may be as high as 30%. If abscesses affect more than one lymph node, the carcass will be condemned at slaughter. Decreased body weight and milk production also occurs, and reproductive efficiency is often lower when these animals have developed internal abscesses.

### **Clinical Signs:**

Most commonly, symptoms are palpable enlargements of one or more of the superficial lymph nodes. The morbidity of the infection rate in goat flocks increase with age, and may approach 70%.

The enlarged lymph nodes have a very thick wall and are filled with thick greenish pus. The most common lymph nodes affected are mandibular (A in figure 1), prescapular (B), prefermoral (C), and supramammary (D) lymph nodes. Less common is involvement of lymph nodes internally in the chest and abdomen. As the animal gets older, abscesses often develop around the lungs, heart, liver, kidney, and spinal cord. They may cause weight loss, pneumonia, and neurological signs.



### **Pathogenesis:**

C. pseudotuberculosis is spread in the environment by broken and draining external abscesses. The organism survives in the environment for at least one year and can be spread on such items as shearing blades, fences, and feeders. The organism enters the goats body through small breaks in skin or mucous membranes and eventually becomes localized in a regional lymph node. Heavy environmental bacteria contamination occurs in confinement operations and around feeders, goat dairies seem to have a high prevalence of CL. There is some evidence that the organism can penetrate intact skin and mucous membrane.

### **Diagnosis:**

- Presence of a firm to slightly soft subcutaneous swelling in the location of a lymph node.
- Herd history of CL.
- Culture: aspiration of the swelling and sending it to the diagnostic lab for isolating and identifying the organism.
- Serology: serologic tests such as bacterial agglutination test and synergistic hemolysis - inhibition test are valuable in identifying goats with early stage of the disease (no abscess yet developing).
- Serologic testing may not be accurate due to the presence of antibodies in previously exposed non-diseased or from cross - reactivity of diagnostic antigens with antibodies against other bacteria.

### **Treatment:**

- Separate and isolate the affective animals.
- Ripened abscesses lanced and flushed with 7% iodine solution.
- The pus should be flushed down a drain, or collected and burned.
- Wear gloves to prevent skin infections in humans.
- Wash hands well after handling infected animal.
- Surgical removal of the encapsulated abscess offers the advantages that the treated animal need not be quarantined.
- Antibiotic treatment has not been effective.

### **Eradication:**

Herd eradication requires diligent management.

- Purchase animals from known non-infected herds.

- Quarantine and monitor new animals at least 60 days.
- Monitor and cull animals with multiple abscessed lymph nodes
- Housing free of sharp objects
- Clean and disinfect feeders and pens regularly.
- Disinfect equipment like de-horners, scalpel blades, tattoo numbers/letters, castrating instruments and other surgical instruments.
- Use a new hypodermic needle for each animal.
- Cull animals with chronic respiratory and wasting disease.
- Bedding cleaned out regularly.
- Pus should be collected and burned.

### **Vaccination:**

A vaccine is available and should be considered in management of CL in infected herds. Vaccine should be considered if you're previously described eradication methods haven't worked or failed. Colorado Serum Company is marketing Caseous-DT, an immunoprophylactic product composed of formalin-killed organisms and toxoided culture supernatant fluid. (Also contains toxoids for clostridium perfringens type D and tetanus toxin.) Which has an efficiency of 70-80% in preventing the clinical manifestations of the disease.

The vaccine may cause severe reactions in infected animals, and also interferes with serologic testing for CL.

## **A Different Approach**

Years ago I observed Dr. Fritz Speck DVM in Early, Texas remove a knot which tested positive. His approach was to inject lidocaine in a circle around the knot. He then took a scalpel and made a cut along the lidocaine circle. He took a hemostat clamp and attached it to one corner of his cut and lifted the corner up. He then cut behind the corner (looked like he was separating 2 sheets of paper) and continued to cut behind until the complete circle was removed. He placed the removed circle of hair/knot on a table (looked like a hairy fried egg). He cleansed the open area on the doe with betadine and sprayed it with Blue Kote. The knot was removed intact allowing the doe to be returned to the herd, without being isolated, because there was no knot drainage. He gave the doe an autogenous vaccine injection, instructed the owner to repeat the injection in two

weeks and again in four weeks. He sent the knot for testing and had an autogenous vaccine made from it. He also gave a Penicillin and Tetanus injection to prevent infection of the open wound and decrease the risk of Tetanus. I spoke to the owner several years later and asked her if the doe ever had another knot. The owner stated she hadn't and when the doe died of natural causes at the age of ten, they opened her up to see if she had any internal knots. She did not.

Dawn Steward