

or the tissue destruction associated with daily processing and venapuncture, as well as intramuscular injections, was sufficient to cause a fibrinogen response. It has been shown that daily blood sampling alone does not alter plasma fibrinogen levels (6). Normal individual fibrinogen values vary widely (3).

Until this trial was conducted, the efficacy of corticosteroids in treating bronchial pneumonia in cattle was not known. Feedlot consultants and practitioners were undecided whether or not to use steroids as an adjunct to conventional antibiotic and/or sulfonamide therapy in bronchial pneumonia. From this study, the following observations and recommendations can be made.

1. Dexamethasone in the treatment of bronchial pneumonia of feedlot cattle results in:
 - a. Increased number of relapses
 - b. Fewer animals to respond to treatment
 - c. Possibility of increased death loss
 - d. Prolonged course of disease before death
2. Dexamethasone is contraindicated in the treatment of bronchial pneumonia.
3. Fibrinogen ratios are unaffected by 20 mg of dexamethasone.

Summary

Administration of dexamethasone (20 mg/hd/day for 3 days) as supportive therapy when combined with antibiotics and/or sulfonamides to yearling feedlot cattle with bronchial pneumonia resulted in poorer response, more relapses and a prolonged course of the disease. Even when combined with antibiotics and/or sulfonamides, dexamethasone should be considered contraindicated in this type of pneumonia.

References

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Oral Vaccine for Prevention of *E. Coli* Diarrhea in Calves

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A problem evolved in a Holstein dairy herd where calves less than 12 hours old developed a profuse watery diarrhea. This diarrhea became increasingly difficult to control with good management and antibiotics. The last antibiotic used that was effective was chloramphenicol. This had to be given at the rate of 1 gram intravenously twice a day for the first two days of life. Necropsy and cultures done at the farm and the State Diagnostic Laboratory showed a severe *E. coli* enteritis. Because rotation of calf maternity and calf-raising buildings did not decrease the severity of the diarrhea, the owner asked if there was another way to control the diarrhea. It was explained that in swine with a similar problem excellent results had been obtained using Dr. Erwin Kohler's¹ procedure for an oral *E. coli* vaccine.

With the owner's permission, Dr. Kohler's procedure was basically followed. Rectal swabs were taken from a calf with acute watery diarrhea. These swabs were streaked on Tergitol 7 Agar and allowed to grow for 24 hours at 37°C. The colonies selected for vaccine production were the ones with smooth edges, yellow in color with no red, and very mucoid. No in-

testinal loop pathogenicity tests were done because my experience has been, in swine, the appearance of the colony on Tergitol 7 Agar is a good indication of pathogenicity. Once the colonies were selected, they were stored in Tryptose Agar slants and also cultured for identification on Bactassay Plates (R)² to insure the cultures were *E. coli*.

Next, a group of dry cows was vaccinated four to six weeks before their parturition date. The vaccine was made by removing some *E. coli* stored in the Tryptose Agar slants and growing the *E. coli* in Brain Heart Infusion Broth for 24 hours at 37°C. The broth is then added to whole cow's milk and incubated for another 24 hours at 37°C. The volume of broth used is 20 ml per gallon of milk. The milk volume is 12 ounces per cow to be vaccinated.

The results obtained in this herd were very good. Thirty-eight calves out of forty were raised after vaccination. Of the two calves not surviving, one calf was born dead, and the other was weak and died within 12 hours of birth with no diarrhea. The same procedure has since been used on two other farms with equal success. The biggest advantage of this system is that the pathogenic *E. coli* can be stored and fresh vaccine made at frequent intervals by a simple incubation procedure. Also, only one feeding of colostrum seems to be sufficient if it occurs within one hour of birth.

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²Bactassay Plates - Pitman-Moore, Washington Crossing, New Jersey 08560.