

# Effect of an Oral Calcium Chloride Gel on Prevention of Hypocalcemic Relapses in Dairy Cattle

Garrett R. Oetzel, David B. Vagnoni, and Kenneth V. Nordlund

*Food Animal Production Medicine Section*

*School of Veterinary Medicine*

*University of Wisconsin-Madison*

*Madison, Wisconsin*

Hypocalcemic relapses affect about 25 to 40% of all dairy cows that are successfully treated for clinical milk fever. Oral calcium supplements may have benefit in reducing the incidence of hypocalcemic relapses, but have not been evaluated for this purpose. Seventy spontaneous cases of milk fever in Holstein cows were used in a prospective, double-blind field study to evaluate the efficacy of an oral calcium gel (Balance™, Bayer Animal Health, Shawnee Mission, KS) in preventing hypocalcemic relapses. Following successful intravenous treatment of milk fever, each milk fever case was randomly assigned to receive two doses of either the oral calcium chloride gel or a placebo gel. The doses were given 12 hours apart. Blood samples were collected prior to initial intravenous treatment and then 24 hours after initial treatment. All initial cases of milk fever and subsequent hypocalcemic relapses were confirmed by a

blood total calcium concentration of less than 7.5 mg/dl. Four of the 31 cows receiving two doses of the oral calcium gel had a clinical hypocalcemic relapse vs. 14 hypocalcemic relapses in the 39 cows receiving the placebo. These relapse rates were significantly different ( $P < .05$ ). Blood calcium concentrations were not significantly different ( $P > .05$ ) between the oral calcium gel and placebo groups by 24 hours after the initial intravenous treatment (4.3 vs. 4.7 mg/dl, respectively). Only 4 of the 70 cows in the study had total blood calcium concentrations greater than 7.5 mg/dl when sampled 24 hours after initial treatment. Results suggest that an oral calcium gel may reduce clinical hypocalcemic relapses in dairy cattle. Results also suggest that hypocalcemia persists for at least 24 hours after treatment for clinical milk fever, even when cows do not relapse.

## Abstract

### Beef Production Management

#### The Fecal Examination: A Missing Link in Food Animal Practice

Donald H. Bliss, PhD, Verona, Wisconsin,

William G. Kvasnicka, DVM, University of Nevada

*Compendium's Food Animal*, Vol 19 (4), April 1997

Fecal examinations are seldom performed for cattle because many veterinarians have long felt that the results of such examinations are unreliable for cattle. Cattle produce a large volume of feces and tend to shed relatively few worm eggs. Consequently, direct smear and dilution techniques are unlikely to provide consistent results. This column discusses the modified

Wisconsin sugar flotation method for detecting worm eggs in cattle feces. This method is much more effective than other methods for detecting worm eggs in bovine feces. The authors feel that this quick, simple, and inexpensive method of fecal examination can help provide a scientific basis for parasite diagnosis and treatment recommendations.