

Bovine Torovirus and Other Enteric Microorganisms in Feces from Clinical Cases of Gastroenteritis in Cattle

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Introduction

Bovine Torovirus (BoTV or bredavirus) is an uncultivable, enveloped, single-stranded RNA virus that causes diarrhea in calves. Our objective was to determine the prevalence of BoTV in bovine fecal samples from clinical cases of gastroenteritis sent to the Ohio Department of Agriculture, Animal Disease Diagnostic Laboratory (ADDL), and its rate of detection with other enteric pathogens.

Materials and Methods

During the year 1999-2000, 185 specimens [39 calves (\leq 6-month-old), 32 young adults ($<$ 2 years), 84 adults (\geq 2 years), 30 of unknown age] were examined by an enzyme-linked immunosorbent assay (ELISA) test developed in our lab to detect BoTV antigen. Testing for other enteric pathogens was performed by ADDL, and the results were recorded and analyzed together with the BoTV data.

Results and Discussion

BoTV was detected in 6/185 (3.2%) of the clinical samples, two in calves and four in adult cattle. In 3/6 ELISA-positive specimens, BoTV was the only pathogen detected among those examined. Other enteric microorganisms detected alone or in combination were: hemolytic *Escherichia coli*, 2/42 (4.8%); mucoid *E. coli*, 15/42 (35.7%); *Klebsiella spp*, 2/42 (4.8%); *Proteus spp*, 2/42 (4.8%); *Pseudomonas spp*, 1/42 (2.4%); *Salmonella spp*, 21/166 (12.7%); *Clostridium perfringens*, 12/42 (28.6%); *Mycobacterium paratuberculosis*, 6/11 (54.5%); *Giardia spp*, 6/16 (37.5%); *Cryptosporidium spp*, 9/22 (40.9%); rotavirus, 4/28 (14.3%); coronavirus, 2/28 (7.1%); bovine viral diarrhea virus, 10/45 (22.2%); and coccidia, 1/1. No consistent associations between BoTV and other microorganisms were observed.

In summary, BoTV was detected in several samples from clinical cases of gastroenteritis in cattle of various ages. Future investigations of infectious diarrhea in cattle may need to include assays to detect this etiologic agent.

Economic Assessment of Twinning in a Dairy Herd in Tehran, Iran

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Introduction

Detrimental effects of twinning have been reported in dairy herds. Dystocia, premature calving, retained placenta, abortion and delivery of freemartins, and their

subsequent effects on reproductive indices and milk production, have been studied extensively.¹ In the present report, negative effects and losses of twinning on reproductive indices, postpartum conditions and milk production were studied retrospectively in a large dairy herd.