

capsules

THE CURRENT LITERATURE IN BRIEF

Tylosin-Responsive Chronic Canine Diarrhea

In the absence of any other diagnosis, many dogs with chronic diarrhea are treated with antibiotics (tetracycline, metronidazole, ampicillin, and tylosin), hence the name antibiotic-responsive diarrhea. Tylosin is a macrolide antibiotic commonly used in large animals as a feed additive. Its mechanism of action is unknown and could be antimicrobial and/or antiinflammatory. This study investigated whether alternative therapies (prednisone or probiotic *Lactobacillus rhamnosus*) were as effective as tylosin in dogs with tylosin-responsive diarrhea (TRD). Extensive diagnostic testing eliminated all possible causes of diarrhea. Historical information revealed that TRD was most common in middle-aged, large-breed dogs with large or small bowel diarrhea. Tylosin stopped the diarrhea within 24 hours of administration. Fourteen dogs with at least a 6-month to 1-year history of TRD started the study. After the drug was stopped, diarrhea recurred within 30 days in 12 of 14 dogs. Three were withdrawn from the study. In the remaining 9 dogs, neither probiotic *Lactobacillus rhamnosus* nor 3 days of prednisone controlled the diarrhea as well as tylosin (mean dose, 11.7 mg/kg PO Q 24 H).

COMMENTARY: Chronic diarrhea in the dog has many causes, including inflammatory bowel disease, exocrine pancreatic insufficiency, parasite infections, dietary sensitivity, intestinal tumors, enterotoxigenic and enteropathogenic bacteria, and small intestinal bacterial overgrowth (SIBO). Of these, only specific infections and SIBO are ordinarily treated with antibiotics. Over the past five years, however, we have come to appreciate that there is another group of dogs with chronic diarrhea that respond to oral antibiotic therapy and have neither bacterial infection nor SIBO. Dogs with this disorder are said to have antibiotic-responsive diarrhea (ARD). Antibiotics used to treat these animals are primarily metronidazole, tylosin, and tetracycline. The authors of this study have added much to our knowledge of this disorder. Using only tylosin in a very well-planned and organized study, they failed to show why dogs respond to oral tylosin but they did shed some light on the problem by eliminating some theories: they speculate that tylosin either controls a yet-unidentified bacterial pathogen, acts as an immunomodulator, or impairs bacterial adhesion to the intestinal mucosa.—*Colin F. Burrows, BVetMed, PhD, MRCVS, Diplomate ACVIM*

Tylosin-responsive chronic diarrhea in dogs. Westermarck E, Skrzypczak T, Harmoinen J, et al. *J VET INTERN MED* 19:177-186, 2005.