



Exploring Causes of Canine Diarrhea

Although diarrhea is a common presentation in dogs, this is the first case-control study of canine diarrhea in which samples were collected contemporaneously from first-opinion practices and screened for a range of pathogens using sensi-

tive molecular techniques. Lifestyle factors, vaccination history, diet, and contact with other species were also evaluated. Data from 86 cases and 167 controls from practices in the UK were included in the final analysis. Multivariable conditional logistic regression showed that dogs were at significantly greater risk for diarrhea if they had recently experienced a change in diet, recently stayed in kennels, scavenged for food, or were fed a home-cooked diet. Up-to-date vaccination history and regular contact with horse feces were associated with a decreased risk for diarrhea; female sex was associated with decreased risk. Only 7% of the samples had evidence of helminth eggs and there was no significant association

between the presence of helminth eggs and diarrhea. None of the pathogens tested (eg, enteric coronavirus, parvovirus, distemper, *Campylobacter* and *Salmonella* spp) was a significant risk factor for diarrhea. Results suggested that in this predominantly vaccinated population, lifestyle risk factors were more likely to be associated with diarrhea than specific pathogens.

Commentary: The authors identify a potential limitation of this study in that every potential pathogen could not be detected. That said, it is still encouraging to see that this population of dogs had few infectious causes of diarrhea. Many cases of diarrhea remain undiagnosed, so more work is needed in this area. Changing foods and preventing scavenging are 2 practices that should be encouraged to lower the risk for diarrhea.—*Patricia Thomblison, DVM, MS*

A case-control study of pathogen and lifestyle risk factors for diarrhea in dogs. Stavisky J, Radford AD, Gaskell R, et al. *PREV VET MED* 99:185-192, 2011.

Shampoo: Therapy of Choice for Pyoderma?

The common standard of treatment for canine bacterial pyoderma is systemic antibiotics with or without concurrent topical therapy, but methicillin-resistant staphylococcal isolates have become increasingly difficult to treat. A study evaluated the efficacy of 2 shampoos (3% chlorhexidine gluconate and 2.5% benzoyl peroxide) as sole therapy in 22 dogs with superficial pyoderma. All dogs had clinical signs of pyoderma (eg, papules, pustules, epidermal collarettes), no evidence of *Malassezia* via cytology, and no ectoparasites and tested positive for staphylococci. All dogs received monthly flea control. Using a 10-minute contact time, the chlorhexidine shampoo was applied twice weekly and the benzoyl peroxide shampoo was used daily for 2 treatments and then twice weekly per manufacturer instructions. Clinical evaluations (eg, pruritus, lesion scores) and quantitative bacterial counts were performed prior to the study and then again on days 8 and 22. Twenty dogs completed the study. Eight of 10 dogs treated with chlorhexidine gluconate and 7 of 10 dogs treated with benzoyl peroxide had clinical response to therapy. Clinical signs resolved in 3 of 10 dogs bathed with chlorhexidine gluconate. No difference was found for epidermal collarettes, crusts or scales, or coat condition; however, a significant difference in the papule/pustular score at day 22 was found in both groups. A significant difference in bacterial counts over time was found only for the chlorhexidine-treated group.

Commentary: Bacterial pyoderma in some dogs can be resolved with topical therapy alone. The target population would be young dogs with puppy pyoderma and with simple pyoderma (eg, not triggered by allergies or another chronic skin disease). Oral medication is unquestionably easier to administer but the increasing problem of methicillin-resistant *Staphylococcus intermedius* (MRSI) clearly shows we cannot continue current treatment protocols. The 10-minute contact time is difficult to achieve if the client lathers the dog and tries restraint in a bathtub. I recommend prewashing the dog with any regular dog shampoo to cleanse the skin and remove gross debris. Clients can then apply the medicated shampoo using an even concentration of shampoo and water. The dog is rinsed and owners are instructed to make sure the procedure took approximately 10 minutes. This method has greatly improved client compliance. Depending on the coat and severity of infection, chlorhexidine gluconate solution formulated into a spray can be used between shampoos. The 4% solution can be diluted to a 2% spray applied topically between bathing. Finally, for dogs with chronic recurrent bacterial pyoderma, twice-daily wiping with antibacterial wipes used in the dairy industry can be used.—*Karen Moriello, DVM, Diplomate ACVD*

Comparison of a chlorhexidine and a benzoyl peroxide shampoo as sole treatment in canine superficial pyoderma. Loeffler A, Cobb MA, Bond R. *VET REC* 169:249, 2011.

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