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News & Comments

The effectiveness of antibiotic therapy in dogs with atopic dermatitis

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The multifactorial pathophysiology of canine atopic dermatitis (AD) involves a complex interaction of genetic susceptibility, sensitization to environmental and/or food allergens, aberrant immune responses, skin barrier dysfunction, and microbial dysbiosis. A healthy cutaneous microbiome is crucial for determining the host's immune responses and for protection against harmful environmental assaults. This open, observational, combined prospective and retrospective study set out to measure the severity of skin lesions and pruritus changes in dogs with AD and skin infections, as well as the investigator's and owner's perceptions of the effectiveness of antibiotic treatment.

20 client-owned dogs with Malassezia dermatitis, non-seasonal AD, and/or bacterial overgrowth/infection were prospectively included. Only systemic antimicrobials were recommended to minimize the reliance on owner compliance and dog cooperation with topical treatment. for dogs who are more likely to get a bacterial infection from an organism that is resistant. The treatment lasted for 1 week after the bacterial overgrowth or superficial bacterial pyoderma cleared up and for 2 weeks after the deep bacterial pyoderma cleared up.

According to the findings of this combined prospective and retrospective observational study, lesional scores in dogs with AD were significantly reduced after skin infections were treated, by 30 24.8 % according to CADESI-4, by 28.1 28.6 % according to CADESI-4-E, and by one grade according to OGA-S. The CADESI-4 scores also reduced in 26.3 % of the dogs from the range of AD-affected dogs to the range of normal dogs, and in 83.3 % of the dogs from the range of moderate-to-severe AD to the range of normal dogs or dogs with mild AD. Before enrolling dogs with AD in research studies, the ideal time to stop using drugs that can lessen the severity of skin lesions and itching has not been established.

Because each outcome measure has advantages and limitations of its own, there is currently no single outcome measure that can properly assess the efficacy of therapeutic interventions in dogs with AD. Due to this, a group of outcome measures, including OGATE, PVAS-N, and CADESI-4-N or CADESI-4-N2M, have been suggested for use in clinical studies. The administration of systemic antimicrobials for the treatment of bacterial and yeast infections that occurred during the trial was not associated with a significant improvement of skin lesions (assessed by the Canine Atopic Dermatitis Lesion Index) or with a clear-cut reduction of PVAS in the severity of skin lesions in 26 dogs with AD sensu lato, which were already under the control of prednisolone or cyclosporine.

In 39 dogs with AD and bacterial and/or Malassezia dermatitis, the use of systemic antibiotics and/or itraconazole, with or without topical treatment with chlorhexidine 2 percent—miconazole 2 percent shampoo, significantly reduced skin lesions and pruritus. Additionally, the investigators and the owners of 55 and 60 percent of the dogs, respectively, rated the treatment's effectiveness as good or exceptional. The effectiveness of the medication varied from dog to dog, and a sizable minority of them did not clearly benefit or even got worse while receiving it.

Source: Veterinary Sciences

KEYWORDS

Allergy; antimicrobials; canine; dermatitis; efficacy; infection; Malassezia; pruritus; Staphylococcus