Northeast Veterinary Dermatology Specialists

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SUMMER 2017 NEWSLETTER

MARK YOUR CALENDAR

NAVDF 2018
May 1-5, 2018
Marriott Wailea Beach Resort & Spa
Maui, Hawaii

NAVDF 2019
April 10 - April 13, 2019
Hilton Austin
Austin, Texas

9th World Congress- 2020
October 20 - October 24, 2020
Sydney, Australia

NVDS

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SUMMER 2017 NEWSLETTER

VETERINARY DERMATOLOGY, HARDER OR EASIER?

With the advent of new, effective, and safer therapeutics for the treatment of allergic and parasitic diseases in dogs, dermatology cases have become, in many ways, easier to manage. Unfortunately, those dogs for which these newer medications are ineffective or cause side effects are more challenging to treat. New therapeutics for pruritic cats with allergic dermatoses are lacking. Management of these cases remains frustrating, as owners find it difficult to medicate their cats or transition them to prescribed elimination diets. Additionally, with the widespread commercial marketing of new products, owner expectations as to what veterinarians can accomplish has risen.

Rather than becoming superfluous, our role as veterinary dermatologists has become more important to you and your clients. Our expertise and experience in handling these challenging dermatology cases gives patients a chance to lead comfortable, healthy lives and transform frustrated, concerned clients into happy owners, grateful for the referral to a specialist.

We hope that you find this newsletter useful. Our website (www.nevetdermatology.com) and Facebook page (www.facebook.com/nevetdermatology) are resources with helpful information that gets updated regularly. As always, we thank you for supporting NVDS and look forward to many further collaborations with you and your clients in the care of their pets.

Lauren Pinchbeck DVM, MS Nina Shoulberg DVM, MS

For more veterinary dermatology news connect with NVDS on facebook at facebook.com/nevetdermatology

FUTURE MEETING DATES:

The American Academy of Veterinary Dermatology ("AAVD") and American College of Veterinary Dermatology ("ACVD") as the founding members created the North American Veterinary Dermatology Forum to present education on veterinary dermatology. Inspired by the passion for the specialty, NAVDF is organized each year in new locations to provide unmatched presenters, networking opportunities with your peers and an exhibit hall filled with products and services to change how you practice vet derm. Join us for an irreplaceable experience no matter your experience!

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CANINE DEMODICOSIS
TREATMENT UPDATE

Dr. Wayne Rosenkrantz, NAVDF 2017

The isoxazolines: afoxolaner (Nexgard®), fluralaner (Bravecto®) and sarolaner (Simparica®) were discussed in a review of canine demodicosis. These drugs preferentially bind to invertebrate neuronal GABA and glutamate-gated chloride channels, thereby blocking pre- and post-synaptic transfer of chloride ions across cell membranes, resulting in the death of insects and acarines. They are approved for use in the control of fleas and ticks; afoxolaner (Nexgard®) starting at 8 weeks of age and fluralaner (Bravecto®) and sarolaner (Simparica®) starting at 6 months of age. The latter 2 drugs should be given with food, afoxolaner (Nexgard®) may be given on an empty stomach. Side effects for all of these drugs appear to be uncommon; the most common side effect of vomiting ranged from 1 to 4% in field studies. In their package inserts, afoxolaner (Nexgard®) reports episodes of seizures in dogs with a prior history of seizures and advises it should be used "with caution" in dogs with a seizure history; fluralaner (Bravecto®) notes one adult lab Beagle suffered a seizure; and sarolaner (Simparica®) reports neurologic side effects including seizures in safety studies using lab Beagles given 3x the recommended dose.

There is good evidence, both published and anecdotal, that the isoxazolines are effective treatments for generalized demodicosis in juvenile and adult dogs. Afoxolaner (Nexgard®), given at the recommended dose on days 0, 14, 28 and 56, showed a greater than 99% reduction of mite counts by day 28 and a 100% reduction by day 84. In an unpublished clinical evaluation by Dr. Wayne Rosenkrantz, monthly afoxalaner (Nexgard®) was very effective in treating demodicocis. He noted only one dog which was on immunosuppressive therapy that required the drug every 2 weeks. Fluralaner (Bravecto®) at the recommended dose and frequency of every 3 months has resulted in a 100% reduction in mite population with 2 treatments. Monthly sarolaner (Simparica®) at the recommended dose resulted in a 97% reduction in the mite population by day 14 and 100% by day 30.

All these drugs come as chewable formulations. Afoxolaner (Nexgard®) is beef-flavored, fluralaner (Bravecto®) is hydrolyzed pork-flavored and sarolaner (Simparica®) is pork liver flavored. Fluralaner's (Bravecto®) marketing suggests it would be compatible for dogs with history of adverse food reactions.

MULTIDRUG RESISTANT ENTEROBACTERIACEAE

from Resistant Infections Weese JS NAVDF 2017

This family of gram negative bacteria includes E.coli, Klebsiella spp., Proteus spp. and Enterobacter spp. Commonly, these organisms produce beta-lactamases which confer resistance to the penicillins e.g. amoxicillin and ampicillin, but not to cephalosporins or clavulanic acid. Of concern is a newer population of Enterobacteriaceae that have acquired extended spectrum beta-lactamases, AmpC beta-lactamases, carbapenemase and colistin-resistance. These organisms are resistant to many, if not all, antibiotics and

are a very serious concern in human medicine. All of these resistant bacteria have been identified in companion animals. Although not a common cause of disease in animals, the potential for pets to function as a reservoir for human infection is concerning. Responsible use of antibiotics by veterinarians may help limit selection for these resistant bacteria, methicillin- resistant Staphylococci ssp., and Pseudomonas.

Practical, well-thought out guidelines for the diagnosis and treatment of canine superficial bacterial pyoderma have been published. We encourage everyone to read them (Vet Dermatol 2014;25: 163-175). What follows is a summary of these guidelines. Topical antimicrobial therapy is almost always indicated. One sees quicker resolution of disease resulting in a shorter course of systemic antibiotics, decreased pruritus through removal of bacteria, debris, and allergens (in the case of our allergic population), and decreased risk of developing resistance in the commensal population of bacteria on the skin. If the pyoderma is localized and the patient and owner are amenable, the recommendation is to first try and treat these infections only topically. If systemic antibiotics are to be used, bacterial culture and sensitivity testing is always appropriate. If one chooses to treat empirically, only "first tier" antibiotics should be used. "First-tier" antibiotics are those typically active against the wild-type population of bacteria that cause infections in these sites. First choice antibiotics for skin infections include amoxicillin-clavulanic acid, clindamycin and the first generation cephalosporins e.g. cephalexin and cefadroxil. There is some concern that third generation cephalosporins e.g. cefovecin, cefpodoxime may select for resistant gram-negative bacteria such as those described above in the family Enterobacteriaceae. There is controversy as to whether they should be considered first-tier antibiotics. Use of second- tier antibiotics e.g. fluoroquinolones, chloramphenicol, aminoglycosides should only be based on culture results indicating susceptibility. The use of third-tier antibiotics e.g. vancomycin, linezolid should only be based on culture results and is STRONGLY discouraged, even if culture indicates that they would be effective. These drugs should be considered reserved for the treatment of serious MRSA infections in humans. The concurrent use of glucocorticoids is strongly discouraged because "it may improve the clinical appearance of the lesions and result in premature discontinuation of the antibiotic whilst also reducing the patient's innate and adaptive immune response to infection." Treatment should continue for at least one week past clinical cure, and it is imperative that patients be rechecked while on the antibiotic. Culture is always indicated if lesions are not resolving on a first-tier antibiotic. Almost all superficial bacterial pyodermas are secondary to an underlying disease. Every effort should be made to identify and treat the underlying problem. Effectively doing so should decrease the frequency of the pyodermas, thereby decreasing antibiotic use and ultimately decreasing the selection for resistant bacteria.

A RESTROSPECTIVE STUDY COMPARING THE INCIDENCE OF CUTANEOUS HISTIOCYTOMA DEVELOPMENT IN ATOPIC DOGS TREATED WITH OCLACITINIB AND CICLOSPORIN

High EJ, et. al. NAVDF 2017

A review of 533 dogs with atopic dermatitis treated with oclacitinib (Apoquel®), and 654 dogs with atopic dermatitis treated with ciclosporin (Atopica®) from 2013 through 2016 showed that a significantly higher percentage of dogs on Apoquel® developed histiocytomas (2.6%) when compared to dogs on Atopica (0.6%). Additionally, the age of onset was significantly older in dogs on Apoquel® (7 years) versus those on Atopica® (1.5 years), and duration before resolution of the tumor was greater in dogs on Apoquel® (14.8 weeks) versus dogs on Atopica ® (4.8 weeks).

USE OF DILUTED BLEACH TOPICALLY IN DOGS

Diluted sodium hypochlorite (bleach) in dogs: antiseptic efficacy, local tolerability, and effect on skin barrier lipids and inflammation (Banovic, F. et. al. NAVDF 2017)

Diluted sodium hypochlorite (bleach) is an available topical antiseptic that we frequently recommend for use on dogs with superficial bacterial folliculitis caused by methicillin-resistant staphylococci. In many of these cases, few or no safe systemic antimicrobials are susceptible to the isolated organism, and we must rely upon frequent bathing with antimicrobial shampoos, sprays and rinses for treatment.

The efficacy and tolerability of diluted bleach used topically in dogs is lacking. In this study, the antibacterial effect and tolerability of topical diluted bleach was evaluated. In addition, the effect of diluted bleach on skin barrier lipids and anti-inflammatory processes using cultured keratinocytes was investigated. The exposure of primary keratinocytes to 0.005% diluted bleach reduced the induction of inflammatory genes and some chemokines, and diluted bleach at 0.05% did not result in any change skin lipids. Topical 0.05% diluted bleach was well tolerated when applied to the skin of healthy maltese-beagle dogs and did not cause erythema or scaling. In these dogs, there was a marked reduction in bacterial counts within 20 minutes of the 0.05% bleach application when compared to tap water alone, yet this reduction was only marginally significant (p=0.06).

The results of this study indicate that the use of topical diluted bleach at 0.05% and 0.005% concentrations is a well-tolerated antiseptic with anti-inflammatory properties. Diluted bleach rinses may be adjunctively helpful in the management of certain bacterial skin infections in dogs.

FOOD ALLERGY TESTING IN DOGS

EVALUATION OF CLINICAL ACCURACY OF SEROLOGICAL AND SALIVARY TESTING FOR FOOD ALLERGENS IN ASYMPTOMATIC DOGS

(Lam, A et.al., NAVDF 2017)

There are several tests marketed to identify food allergies in dogs that purport to measure serum or salivary immunoglobulin levels specific to diet components. The utility of such tests in diagnosing adverse food reactions in dogs is without validation. In this study, serum and saliva collected from dogs without clinical signs or historical features of cutaneous or gastrointestinal adverse food reactions were tested with two serologic (test A and test B) and one salivary (test C) assays. Thirty asymptomatic dogs ranging in age from 1-10 years and of varied size (2.2-50.8 kg) were included. Medical and thorough diet histories were obtained. Fourteen foods common to all 3 assays were assessed.

Results were classified into positive or negative responses to each food. All dogs had at least 1 positive result to a food. One or more dogs tested positive to 14/14 (100%) foods in test A. One or more dogs tested positive to 12/14 (86%) foods in test B. One or more dogs tested positive to 14/14 (100%) foods in test C. There was no predictable association between a positive response to a particular food and previous exposure to that food. Results of this study show that results of serologic and saliva tests do not correspond to clinical evidence of adverse food reactions. With use of such tests, there is a risk for over diagnosis of adverse food reactions in dogs. At this time, the diagnosis of adverse food reactions in dogs is best pursued by evaluating the response to a monitored and interpreted elimination diet trial.

RESISTANT INFECTIONS

from Weese, JS NAVDF 2017

Antibiotic development and availability has certainly impacted our ability to treat bacterial infections. However, the development of resistance to current antibiotics by bacteria (those we are aiming to treat and resident populations) is of continued and heightened concern Antimicrobial resistance has the potential to gravely impact human and animal health, as the development of new antibiotics is slow and arduous.

Antimicrobial resistance means that the bacterium has an inherent or acquired ability to evade inhibition or killing by an antimicrobial. It does not mean that the bacteria is any more virulent, as resistance is not itself a virulence factor. The clinical approach to treatment of a resistant bacteria causing disease is not different than how we treat susceptible organisms. However, it is the prompt identification of the presence of a resistant bacteria causing disease that is important so that we may institute treatment when the isolated organism is considered to be the pathogen causing clinical signs.

Staphylococci are opportunistic pathogens that are good at causing infection. Of interest to veterinary dermatology, they are common bacteria causing skin and ear infections. Staphylococci quickly developed resistance to penicillin after its discovery and have continued to pose clinical challenges as they continue to adapt to antimicrobial pressures and exposure. The emergence of methicillin- resistant Staphylococcus pseudintermedius (MRSP) and methicillin- resistant S. aureus (MRSA) has changed veterinary dermatology. MR Staphylococci are widely disseminated in animals with infection and those that carry the organism without clinical disease.

Why are MR Staphylococci concerning? They are inherently resistant to commonly used antibiotics, acquire resistance to antimicrobials important for the treatment of other bacterial classes, commonly cause skin and soft tissue infections we see daily, and could be considered zoonotic. Additionally, they rapidly acquire resistance genes and will continue to evolve and create treatment challenges.

What can we do in veterinary dermatology? Increase use of topical therapy in treatment of skin and ear disease where appropriate. In doing so, we can resolve infections and reduce antimicrobial exposure and selection pressure. We can also change how we use antibiotics in daily practice, paying attention to published guidelines, doses, and durations of treatment as recommendations change. Identification of primary diseases causing secondary infections continues to be crucial.

THE FREQUENCY OF URINARY TRACT INFECTIONS IN DOGS WITH ALLERGIC DERMATITIS TREATED WITH OCLACITINIB:
A PROSPECTIVE STUDY

Simpson, A et.al. NAVDF 2017

Oclacitinib (Apoquel®) is a selective Janus kinase inhibitor indicated for the treatment of canine allergic pruritus and atopic dermatitis in dogs of at least 12 months of age. It has been established that use of glucocorticoids and cyclosporine increase the frequency of urinary tract infections (UTI) in dogs, yet clinical signs of such infections are not always apparent due to the anti-inflammatory effects of the drugs. We routinely perform urine cultures on such patients as part of monitoring.

This study evaluated the frequency of UTI in dogs with allergic dermatitis that were treated with oclacitinib. Included dogs were client owned, > 2 years of age, and had a history of allergic disease but did not have a history or predisposition to UTI. Urinalysis and urine culture were performed after discontinuation of systemic antimicrobials, glucocorticoids, and cyclosporine for a specified time. Such medications were not permitted for the trial period. Dogs were treated with oclacitinib for 180-230 days and urinalyses and urine cultures were performed. None of the 55 dogs enrolled developed UTI while receiving oclacitinib based upon results of urinalysis and urine culture. These tests were performed during a range of 58-280 days into the study (mean 195 days). Two dogs developed self-limiting abnormal urinary tract signs that were consistent with UTI but did not have culture or urinalysis results that were consistent with UTI. In contrast to glucocorticoids and cyclosporine, UTI is not an expected side effect in dogs treated with Apoquel® in dogs without a prior history of or predisposition to UTI. Routine urine cultures as part of therapeutic monitoring of dogs on Apoquel® is not indicated in the absence of an abnormal urinalysis or clinical signs of UTI.

NVDS

HOSPITAL LOCATIONS

We offer patient appointments and services in New York and Connecticut, at the following veterinary hospitals:

Hudson Highlands
Veterinary Specialty Group
222 Lime Kiln Road
Hopewell Junction, NY 12533

Katonah-Bedford Veterinary Center
546 N. Bedford Road (Rte. 117)
Bedford Hills, NY 10507

Central Hospital for
Veterinary Medicine
4 Devine Street
North Haven, CT 06473

Newtown Veterinary Specialists
52 Church Hill Road
Newtown, CT 06470

Norwalk Veterinary Hospital
726 Connecticut Avenue
South Norwalk, CT 06854

Norwalk Veterinary Referral
and Emergency Center
123 West Cedar Street
Norwalk, CT 06854

Shoreline Veterinary Referral
and Emergency Center
895 Bridgeport Avenue
Shelton, CT 06484

To schedule a dermatology appointment at any of our locations, please call us at

914-777-DERM (3376).

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