

Hot Topics
**IN VETERINARY
DERMATOLOGY**



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SETTING UP A TREATMENT PLAN FOR ATOPIC DERMATITIS

Dr. Ashley Bourgeois

Atopic dermatitis (AD) results from an inherited predisposition to develop hypersensitivities to environmental allergens that do not induce a problem in non-allergic individuals. Allergens can include dust mites, pollens, danders, insect particles, and molds.

The paws, axillae, abdomen, and face are common areas to develop pruritus and secondary lesions. Secondary skin infections or otitis externa with *Malassezia pachydermatis* and/or *Staphylococcus pseudintermedius* are common complications of AD. Clinical signs can be seasonal or nonseasonal. It is common for dogs to start developing signs between one and three years old, though it's possible at any age. Symptoms can also progress, and it is common for pruritus to start out seasonally and become year-round as the dog gets older. Identifying early signs and starting an allergic workup right away is extremely important.

Developing a treatment plan for an allergic pet is not universal. There are different reasons to select certain therapies, depending on the pet's behavior, owner's ability, symptoms, comorbidities, etc. Three categories should be considered when managing dogs with atopic dermatitis: addressing infection, symptomatic pruritus treatment, and long-term goals.





Client communication could be the most important part of dealing with dermatology patients. Relate and empathize with the owner about the chronicity and expense of allergies. A lot of frustration can be avoided by letting the owner know the long-term nature of allergies (flares, etc.) and therapy in the beginning. Also, determine what is realistic for the owner regarding finances, topical therapy, diet trials, etc.

If you have a board-certified dermatologist in your area, refer early! Dermatologists love to see cases at the beginning of their allergy journey so we can prevent resistant infections and keep pets comfortable.

1. Addressing infection means cytology should be collected often. If there is abnormal skin, then grab a slide and take a look under the microscope. Systemic antimicrobials are important when warranted, but topical therapy should be considered when possible—not only to treat the active infection but as maintenance therapy to help prevent future infections. Overlooking infection can cause allergy medications to appear ineffective when they may be a great treatment option for that pet.

2. Symptomatic treatment includes antipruritics that can provide more immediate comfort to improve the dog's quality of life. There are many different options, including a fast-acting daily oral tablet (oclacitinib) and an injectable monoclonal antibody (lokivetmab) that can provide four to eight weeks of comfort. These medications have fewer side effects than traditional anti-inflammatory drugs such as corticosteroids.

3. Setting up a client's expectation that AD is a chronic, lifelong disease from the first exam will avoid a lot of frustration. Figure out what the client's goals are for management. The best long-term therapy includes allergen-specific immunotherapy formulated from environmental allergy testing. It is the safest therapy and the only one that can help reverse the pathogenesis of the disease itself.



THREE TIPS FOR TALKING ABOUT ALLERGIES WITH YOUR CLIENTS

Dr. Gina Brandstetter

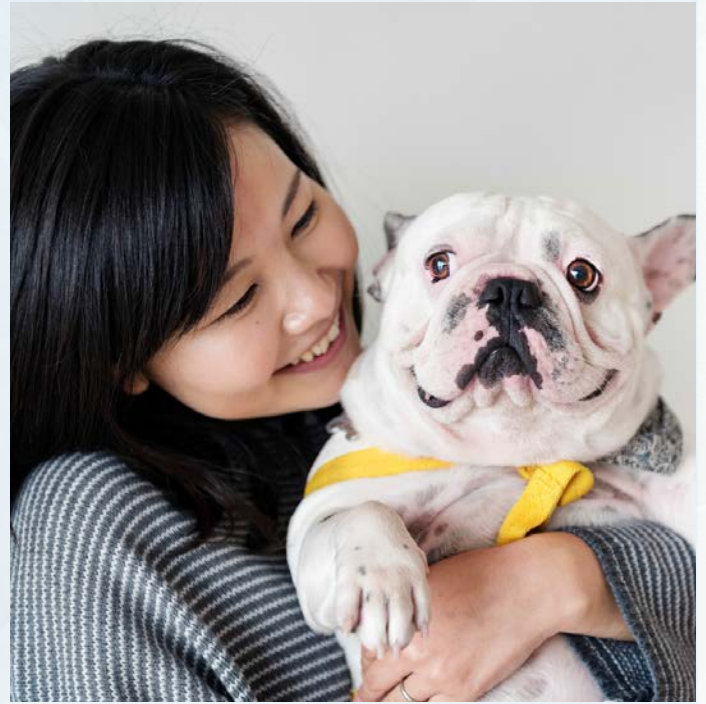
Talking about allergies with pet owners can be a dreaded conversation. Allergic skin diseases are almost never simple to manage long term, which can make them very frustrating for owners and veterinarians alike. It takes time to dissect for owners the lifelong implications for their allergy-prone pets. Since time is often something we lack as veterinarians, we want to provide you with a few key talking points to make this conversation easier and to reduce the long-term frustrations for everyone involved with allergic pets.



1.

SET LONG-TERM EXPECTATIONS AS EARLY AS POSSIBLE.

Even if it is the first time this patient is having a problem with allergies, it is worth laying some groundwork with the owner about allergy basics and what to expect. A thorough history is critical to identify seasonal patterns, predisposing conditions, or perpetuating factors that are key to your management approach and prognosis. You can help shape owner expectations by quickly explaining the most common forms of allergy (flea, food, atopy) and educating the client on which type you most suspect. Also, being transparent when more than one type of allergy is on the list of differential diagnoses is helpful to establish a collaborative problem-solving approach. This helps the owner anticipate the importance of follow-up appointments or even lifelong management.



2.

VERBALIZE THE POSSIBILITY (OR LIKELIHOOD) OF FRUSTRATIONS ALONG THE WAY.

Owners usually want (or expect) a quick fix. It is important to let them know in advance that this is not usually the case with allergies. That way, when a flare-up occurs, the owner may be more understanding that flares do not indicate a treatment failure. Establishing this predictability builds the owner's confidence in your abilities, which in turn will make them more likely to seek your help when relapses do occur. Alternatively, an owner who does not understand that there will be setbacks may not trust that you managed the case well. This unfortunately creates clients who take their allergic pet from one veterinarian to the next, never establishing a strong VPCR or consistent treatment.



3.

EMPHASIZE YOUR COMMITMENT TO WORKING TOGETHER LONG TERM.

Working as a team, the veterinarian and owner aim to keep the allergic pet comfortable, happy, and healthy. Let the owner know that there are many approaches to managing allergies and that we as veterinarians have options. Assure them that you have back up plans for acute pruritus, plans for treating recurring flare-ups, and plans for lifelong management if necessary. If we can proactively create trusting, collaborative client relationships, then we can benefit the patient by establishing better continuity of care through the ups and downs of allergic management.

HOW TO IMPLEMENT SHAMPOO THERAPY

Dr. Ashley Bourgeois



A common antibacterial agent found in shampoos is chlorhexidine. It is generally well tolerated and not irritating. It is important to use products that contain 3-4% chlorhexidine if it is the sole active ingredient against the pyoderma



Topical therapy should always be considered in management of canine atopic dermatitis—not only when an active pyoderma is present but as long-term maintenance to prevent recurrence. It is particularly valuable for controlling chronic, recurrent cases of *Staphylococcus* sp. to avoid development of methicillin resistance. Topical therapy may decrease the length of time or even eliminate the need for systemic antibiotics.

Certain topical therapies not only decrease bacterial populations and reduce surface recolonization, they help restore the epidermal barrier. The epidermal barrier has been shown to be abnormal in the skin of atopic dogs, even if it is non-lesional. This emphasizes the importance of utilizing restorative topical products even in well-controlled atopic patients. Used as a part of the maintenance protocol, these products can minimize the use of systemic allergy medications needed for management.

Many topical formulations are available. However, bathing with high-quality shampoos is the preferred method if the dog will allow it and the client is able. Since dogs with bacterial pyoderma often have atopic dermatitis, bathing also removes allergens from the surface of the skin. This helps reduce inflammation and pruritus the dog is experiencing from the primary disease.

A common antibacterial agent found in shampoos is chlorhexidine. It is generally well tolerated and not irritating. It is important to use products that contain 3-4% chlorhexidine if it is the sole active ingredient against the pyoderma (most commonly *Staphylococcus pseudintermedius*). However, 2% chlorhexidine has been shown to have a synergistic effect with miconazole if a combination product is selected.

Benzoyl peroxide shampoos are available and have been shown to have antibacterial and follicular flushing properties. However, watch for xerosis (dry skin) and irritation if using this ingredient on a more regular basis.

A recent study showed promise for the use of a shampoo with a combination of salicylic acid and sodium hypochlorite as active ingredients.¹ Dogs were bathed with the shampoo three times weekly for four weeks, and seventeen of nineteen dogs completed the study with positive results. This could provide an alternative for chlorhexidine-based products, especially in difficult pyoderma cases.

Bathing frequency depends on the severity of the case and the owner's willingness to bathe. If you have a proactive owner, then many cases of pyoderma (even if resistant) can be managed with a bathing protocol alone. Cases of pyoderma typically benefit from frequent bathing (every two to three days) initially, followed by weekly maintenance. Contact time is another important aspect of a bathing protocol. Instruct owners to leave the shampoo on the skin for at least five (preferably ten) minutes before thorough rinsing.

It is highly recommended to talk to owners about the benefit of a consistent bathing protocol for their allergic pets. Not only for infection but for overall management of the skin.

“ A study showed that a shampoo formulated with sodium hypochlorite and salicylic acid was shown to be effective as sole therapy for dogs with superficial pyoderma associated with *Staphylococcus pseudintermedius*, including methicillin-resistant strains. ”



Reference

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TIPS WHEN USING ANTIMICROBIAL SHAMPOOS FOR SKIN DISEASE

Dr. Michael Rossi

Antimicrobial shampoos are excellent tools for managing many dermatological issues, but only if chosen wisely and used correctly. Client education is extremely important when trying to get the most out of your topical selection. Encourage your clients to follow these tips to help get your dermatology patients on the right track:



- Use lukewarm water when bathing a patient to avoid further irritating the skin.
- Apply the product liberally and massage the shampoo well onto the skin and coat.
- Never use a stiff-bristled brush or hard glove when working shampoo into the coat.
- Allow the shampoo to contact the skin and coat for at least five to ten minutes before rinsing.
- Gently towel-dry or use a hair dryer.

HOW TO TALK TO YOUR CLIENTS ABOUT MEDICATED SHAMPOO

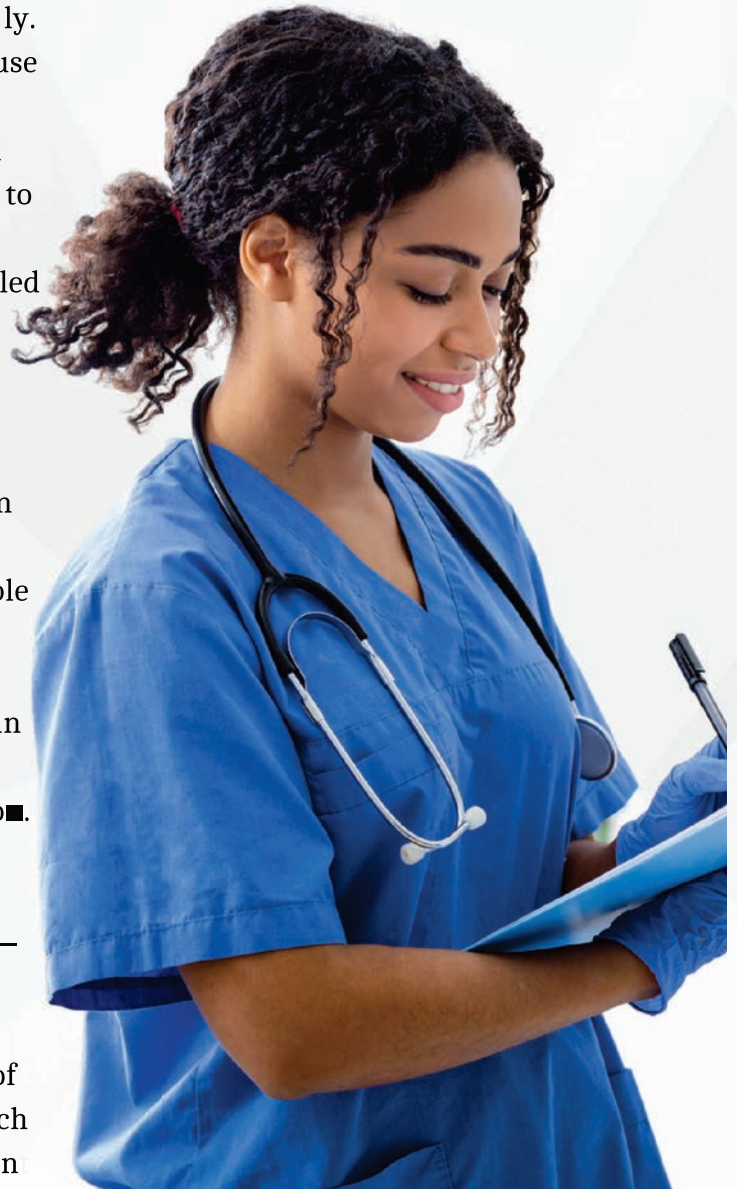
Dr. Gina Brandstetter



Medicated shampoos are an excellent tool if used correctly. Unfortunately, many owners do not understand how to use prescribed shampoos properly and are not given much explanation. Why do we describe in detail the use of oral medications but often fail to explain as much about how to perform topical treatments? When it comes to client education, topical and oral prescriptions should be handled with the same level of attention.

If the pet owner is to comply with medicated baths, it is helpful to first explain why a particular shampoo is advised. Do this by mentioning the specific ingredients in the prescribed shampoo that will help with their pet's particular condition. If these ingredients are also available in over-the-counter shampoos at pet stores, mention the higher concentrations of active ingredients in the prescribed product. A client who understands the value in the product and how it will help manage the particular condition will be likelier to comply with your prescription.

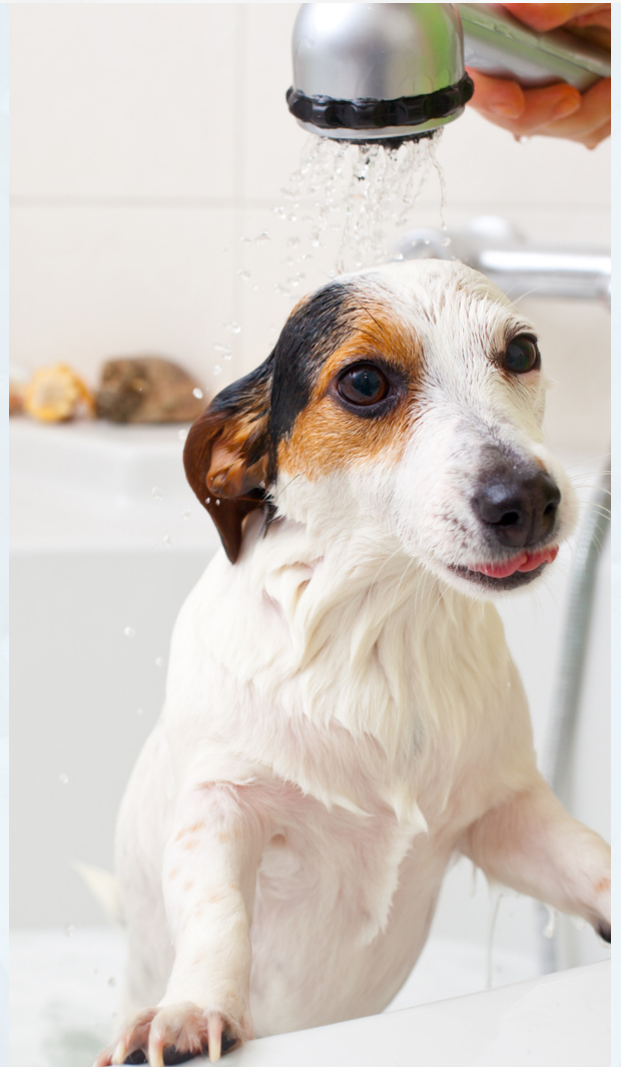
Figure out who in your veterinary team will explain to owners exactly how to use shampoos and other topicals — will it be your reception team, your room technicians, or the veterinarians themselves? It is probably easiest to assign this to whomever explains the use and warnings of oral prescriptions. Consider additional measures, too, such as using specialized prescription stickers or printing client handouts on how to use the shampoo.



Ultimately, the owner needs to understand that using medicated shampoos requires a particular process. Here are some of the key points to cover:

- Medicated shampoos don't usually create a lot of suds. This is normal for many medicated shampoos—lack of foam does not mean the product is expired or defective.
- They will need to lather thoroughly, massaging the product into the fur so that it penetrates down to the skin.
- Once the shampoo is thoroughly applied, it will have to sit for several minutes before rinsing. Refer to the bottle, as it will often say how long is necessary for a particular shampoo.

Adopting a few new strategies and communicating these points to pet owners will help ensure that prescribed medicated shampoos are used properly and with good compliance.



MANAGEMENT OF HYPERKERATOSIS

Dr. Ashley Bourgeois

Hyperkeratosis is a condition where excess keratin (a structural protein of the skin) is produced, causing the skin to thicken or harden. This can happen on the skin (especially at pressure points such as elbows), paw pads, and the nasal planum. If hyperkeratosis becomes more pronounced, it can lead to secondary infections and cracking of the skin.

Typically, a dog's epidermal turnover time is twenty-two days. If this epidermal turnover rate is altered, then epidermal thickness changes abnormally. Conditions of hyperkeratosis can be split into congenital and acquired. Acquired hyperkeratosis is seen more often. A classic example of acquired hyperkeratosis is an elbow callus in a mature, large-breed dog.

Another common form is nasal hyperkeratosis, which can be seen in any breed, but especially boxers, Boston terriers, and English bulldogs. This is due to abnormal facial architecture that does not allow the dorsal portion of the nasal planum to rub frictionally on common surfaces such as food dishes.

“ **Conditions of hyperkeratosis can be split into congenital and acquired. Acquired hyperkeratosis is seen more often. A classic example of acquired hyperkeratosis is an elbow callus in a mature, large-breed dog.** ”

Diagnosis of hyperkeratosis may be made clinically or require a biopsy depending on the clinical presentation. Histopathology findings include epidermal hyperplasia and marked parakeratotic or orthokeratotic hyperkeratosis. Histopathology rules out other important differential diagnoses such as pemphigus foliaceus, discoid lupus erythematosus, drug reaction, etc.

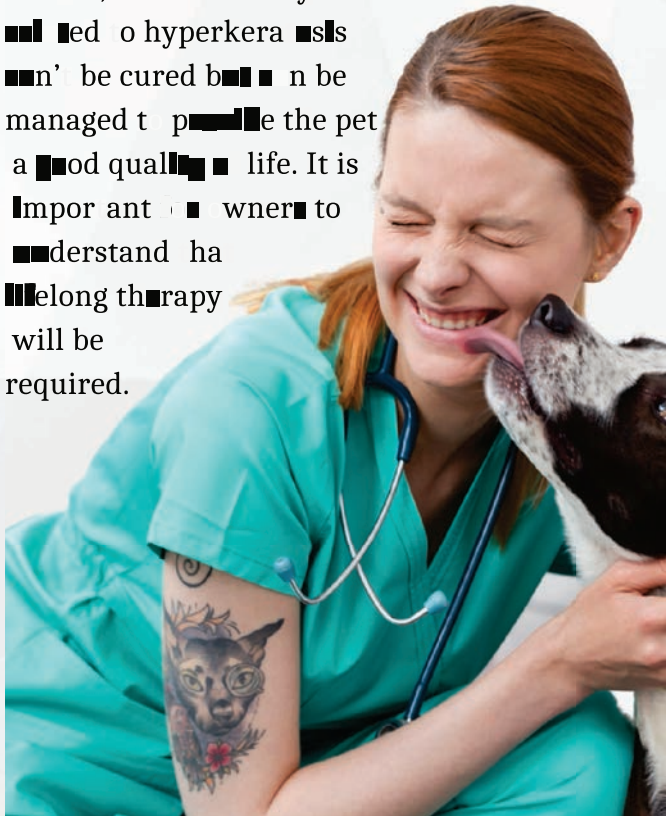
The formation of abnormal keratin cannot be prevented in canine hyperkeratosis. Like many other dermatologic conditions, the disease is managed long term. Topical treatments are typically recommended to provide hydration to the affected area. These can include ingredients such as salicylic acid, urea, petrolatum, and propylene glycol.



Salicylic acid is a keratolytic that causes desquamation of the stratum corneum without affecting the structure of the epidermis. It helps to increase the moisture of the skin while allowing keratinocytes to shed easier. Urea is also a keratolytic that moisturizes the skin by softening keratin and promoting desquamation, which normalizes the epidermis. Using urea in a topical formulation allows the product to feel less greasy, which is preferable to owners. A successful topical product used in cases of hyperkeratosis (especially nasal hyperkeratosis and calluses) includes 6.6% salicylic acid and 5% urea.

Petrolatum can be found easily by owners over the counter. It has lubricating and coating properties that can help the skin retain water. However, it is thick, greasy, and can easily stain carpet and furniture around the house if not allowed to dry after application. Propylene glycol is a lipid solvent and removes fats from the skin. It acts as a humectant and keratolytic similar to the other therapies.

Though hyperkeratosis is often viewed as a cosmetic issue, it is an abnormality that can lead to cracking of the skin, bleeding, discomfort for the pet, and secondary infections. Conditions such as hyperkeratosis can't be cured but can be managed to provide the pet a good quality of life. It is important for owners to understand how long therapy will be required.



SODIUM HYPOCHLORITE AND SALICYLIC ACID SHAMPOO FOR TREATMENT OF CANINE STAPHYLOCOCCAL PYODERMA - Vet Candy Staff



A shampoo formulated with sodium hypochlorite and salicylic acid was evaluated as sole therapy for dogs with superficial pyoderma associated with *Staphylococcus pseudintermedius*, including methicillin-resistant strains.

Client-owned dogs were shampooed three times weekly for four weeks. Dogs were evaluated at baseline and at two and four weeks by cytology, clinical examination, and owner assessment.

Baseline bacterial counts, clinical assessments and owner scores were significantly improved at two and four weeks. Clients completing the study reported excellent lathering and dispersion, reduction in odor, and brightening of white and light coats.

Learn more:
[**Sodium Hypochlorite/Salicylic Acid Shampoo for Treatment of Canine Staphylococcal Pyoderma**](#)





LISTEN AND LEARN

According to data collected from pet insurance companies, skin allergies top the list for reasons policyholders take their pets to the vet. On this episode of Vet Candy's Podcast, Dr. Jennifer Chatfield and Dr. Jason Chatfield talk with "The Derm Vet," Dr. Ashley Bourgeois, about hot topics in dermatology. From skin allergies to ear infections, all itchy subjects are covered.

[Listen now](#)

THREE RULE-OUTS FOR ITCHY DOGS

Dr. Jeff Tinsley

Pruritic skin diseases are a common problem in dogs. These cases can be frustrating to diagnose and manage in the long term. Breaking the list of most common differentials into three main categories can help any clinician quickly assess and compartmentalize their diagnostic and treatment approaches: parasites, allergic disease, and endocrine diseases.

Itchy parasitic infestations are often caused by fleas or scabies mites. Most species of demodex mites don't cause itchiness themselves, but a secondary infection with underlying demodicosis can certainly present with pruritus. Skin scrapings can be helpful for diagnosis, but in some cases, it may be difficult to find the mites, and treating prophylactically should be considered.

A common reason for pruritis in dogs is flea infestation. Some patients have a true hypersensitivity to fleas, so effective flea prevention is paramount.

Another common cause is food allergy. With food allergy, patients typically present as pruritic year-round. The only way to definitively determine if a patient has allergies to food is to perform the classic food trial. The gold standard is a strict 8- to 12-week diet elimination trial with a prescription novel or hydrolyzed protein, with a re-challenge of the previous diet. Re-challenge of the old food is important to rule out other factors. An itchy patient with concurrent GI signs should also increase suspicion.





Atopy is another common type of allergic disease. However, one must remember that atopy is a diagnosis of exclusion. That means that all other possible causes of itch should be ruled out to confirm atopy. Patients with seasonal or fluctuating pruritus throughout the year should be under high suspicion for atopy. Atopy can also present as non-seasonal itch if a patient is sensitive to indoor allergens such as dust or human and/or feline dander.

Endocrine diseases, specifically hypothyroidism and hyperadrenocorticism, are not usually itchy. However, these hormonal disorders are infamous for causing secondary bacterial infections on the skin. These patients are typically older dogs, often

those that are not itchy until skin lesions appear. Once their lesions are cleared, they are non-pruritic again. Older patients that have recurrent skin infections, with or without characteristic clinical signs for endocrine diseases, should be considered for bloodwork to determine if they have an underlying condition.

Breaking differentials into major categories makes skin disease easier to manage. Always get a good dermatologic history and rule out secondary infections in every skin case. Focusing on their primary cause of discomfort will provide patients will the most long-term relief. Remember, some patients may have more than one cause of pruritis.

HOW TO APPROACH A PRURITIC PATIENT

Dr. Jeff Tinsley

The best way to approach any itchy patient is always systematically. It is important to have a mental flow chart prepared to quickly rule out common differentials. The most common causes of itch, which all clinicians should have ingrained in their mind, are the age-old classics: skin infections, parasites, and allergies. Endocrine, autoimmune, and neoplastic diseases can also cause pruritic secondary infections and should be kept on the back burner.

A vital initial step for itchy patients is a thorough dermatologic history. A detailed history can turn a long list of differentials into a succinct, manageable list. Keep in mind that pruritis can include licking, biting, scratching, head-shaking (for otitis), and scooting.



Examples of helpful questions include:

- How long has your pet been itchy?
- Does it seem year-round? Does the itch fluctuate throughout the year?
- Did you notice a rash before the itch began?
- Did you notice scratching before the rash appeared?
- What is your current flea prevention regimen?

A good physical exam should follow the history along with diagnostics. Most skin diseases cause itchy secondary infections. A skin cytology is an easy and underrated tool for “infection inspection.” A skin cytology should be performed on every skin patient at every visit with few exceptions. This diagnostic step can determine if infection is present, if the infection is yeast or bacterial, the severity of the condition, and if inflammatory cells are present.

Repeated cytologies can determine whether a current treatment plan is working and influence subsequent diagnostics. For example, if the skin cytology on a recheck visit reveals increased or different bacteria between visits, then a bacterial culture may be warranted. Another example, if a patient's infection has resolved cytologically but concerning lesions are still present, then bloodwork or biopsy may be warranted. Perhaps the patient's infection appeared cleared on cytology and the skin is clinically normal, but they are still itchy. In this scenario, an allergy workup is warranted.

After assessing for infection and parasites, most patients will need an anti-pruritic. The choice for each patient is clinician-dependent. Past response for each patient may help guide treatment choice.

Ultimately, short-term and long-term treatment plans that cater to each patient—and their pet parent—are ideal for long-term success. It is important to remember that obtaining a definitive diagnosis and pruritis control may require several follow-up visits, on-going skin maintenance, and sometimes a referral to a dermatologist.



A NOVEL THERAPEUTIC APPROACH TO RESISTANT SUPERFICIAL DERMAL INFECTIONS

SPONSORED ARTICLE

Dr. Michael Rossi

What do you tell your clients when their beloved, four-legged family member has a superficial, bacterial infection that is not improving with their oral therapy? Most of us as practicing veterinary professionals have been in a situation where patients do not respond as expected with conventional antimicrobials.

The worldwide emergence of bacterial strains resistant to virtually all antimicrobials available in veterinary medicine, namely methicillin-resistant *Staphylococcus pseudintermedius*, has complicated how we clinically manage bacterial infections. While the problem of antimicrobial resistance is increasing with alarming speed in both animals and humans, there has been a striking reduction in the number of new antimicrobial products in both of these fields. This has shifted focus away from systemic antimicrobial agents and put more pressure on the development of novel topical applications to manage superficial infections.

These alternative methods are being highly utilized as either monotherapy or as part of a polytherapy program to prevent or treat superficial infections in the veterinary community. Some of the most common patients needing help with controlling infections are those with atopic dermatitis or atopy.

Atopic dermatitis is a chronic, immune-mediated disease of cutaneous inflammation and barrier dysfunction that affects approximately 10-15% of the total canine population. The condition can be extremely frustrating and time consuming for both the pet owner and the veterinarian alike. Factors, such as diverse clinical presentations, variations in the extent of clinical lesions, and the presence of secondary infections, including those by *Malassezia* yeast, complicate its treatment and have a significant impact on the human-animal bond. Many recent studies, in both veterinary and human





medicine, have highlighted the need, not only to address the systemic inflammation, but to correct the known skin barrier defect in the atopic patient. There is mounting data that shows that there is marked susceptibility of individuals with atopic dermatitis to develop infections on the skin with *Staphylococcus aureus* in humans and *Staphylococcus pseudintermedius* in dogs.

These infections are thought to play a significant role in exacerbation of atopic dermatitis lesions. In theory, controlling the bacterial overgrowth in atopic patients could lead to better control of their underlying disease. Recently, there has been increased interest in the use of topical sodium hypochlorite (bleach) solutions in the treatment and prevention of superficial infections in canine and human patients. Most of the dilute concentrations are low enough to be safely used in children while showing efficacy against bacteria.

A recent report in *Veterinary Dermatology* showed excellent in vitro antimicrobial effectiveness of sodium hypochlorite at a dilution of only 0.00156% after 3 and 5 minutes of contact time. With little to no documented resistance, this makes this ingredient very effective in managing skin infections. We are very fortunate to have this agent commercially available in Command™ shampoo from Vetrimax. This product has shown efficacy against superficial infections caused by Staphylococcal bacteria, as well as those caused by *Malassezia* yeast.

Using this product in conjunction with a sound long-term management plan, such as allergen-specific immunotherapy, has the potential to mitigate the number of atopic flares and secondary infections. In addition to reducing the bacterial colonization on the skin, one of the other important factors in treating atopic skin disease is correcting the cutaneous barrier dysfunction. We know through numerous studies that the ceramide content within the skin of atopic patients is deficient. Many of the topical products that we utilize on a regular basis aim to replenish these crucial moisturizing factors in an attempt to normalize the barrier defect and reduce transepidermal water loss.

AtopiCream™HC

Leave-On Lotion from Vetrimax is a rehydrating lotion that contains a steroid, as well as a ceramide complex and essential fatty acids to aid in restoring the normal function of the skin. Along with the moisturizing effects, this product also contains hydrocortisone. The benefits associated with this topical glucocorticoid have been well established in both canine and human patients diagnosed with atopic dermatitis. Some studies have even shown a >50% reduction in clinical lesions and pruritus scores when this compound was utilized on lesional skin. This product also comes in a steroid-free version. This could lead to a significant benefit in patients suffering from this condition if used on a routine basis. The field of veterinary dermatology continues to change at a rapid pace. As a whole, we are searching for cutting edge treatment options for controlling atopic dermatitis without over medicating patients. Most of us are doing this by advancing our knowledge of allergen-specific immunotherapy and through advancements of topical therapies. Incorporating Command™ shampoo and AtopiCream™HC in a long-term, topical management plan should increase our ability to control superficial infections and increase patient comfort from atopic flares.



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CONTINUING EDUCATION INFORMATION

This program 1487-44173 is approved by the AAVSB RACE to offer a total of 1.0 CE Credits, with a maximum of 1.0 CE Credits being available to any individual veterinarian or veterinary technician/technologist. This RACE approval is for the subject matter categories of medical and non medical using the delivery method of lecture/seminar .This approval is valid in jurisdictions which recognize AAVSB RACE; however, participants are responsible for ascertaining each board's CE requirements. This program is also approved in the State of New York for 1.0 CE Credits.

The American Association of Veterinary State Boards RACE committee has reviewed and approved the program referenced above as meeting the Standards adopted by the AAVSB.



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