The Connection Between Atopy and Food Allergy

Canine atopy is reported to affect between 3 and 15% of the canine population. Up to 80% of these dogs also are flea allergic and up to 30% are food allergic. In two university studies evaluating cats with pruritus, miliary dermatitis or eosinophilic granuloma complex, food allergy was identified in 13 to 17% of the cats while atopy was identified in 15 to 17% of the cats. Hence, these are common problems in both dogs and cats.

Atopic dermatitis is defined as a genetically predisposed inflammatory and pruritic condition of dogs and cats. This condition is induced by IgE antibodies to environmental allergens, such as pollens, molds and house dust. Exposure to environmental allergens occurs via contact with skin, respiratory mucosa or gastrointestinal mucosa, although the respiratory route is most common. Likewise, food allergic dermatitis is thought to be an IgE mediated condition, with allergen exposure occurring via the gastrointestinal mucosa. Food allergy in humans is considered to be an IgE mediated hypersensitivity in most cases, and thus shares the same pathogenic mechanism as atopic dermatitis. Typical features common to both atopic dermatitis and food allergic dermatitis in dogs include: young age at onset, pruritus of the ears, axilla, inginal area and distal limbs, frequent occurrence of otitis and recurrent secondary bacterial or yeast infections. In dogs with a non-seasonal presentation of these clinical signs, it may be difficult to impossible to distinguish between the two conditions on a clinical basis alone. In addition, the presence of food allergy may contribute to the development or exacerbation of atopy, especially if the gastrointestinal mucosa is compromised as a result.

In humans and dogs, atopy and food allergy frequently occur together. Nearly one-third (32.7%) of 58 atopic dogs entered into an elimination diet trial were confirmed to be food allergic. A significant reduction in pruritus was observed in atopic dogs (confirmed atopic based on positive serum IgE response to inhalant allergens or mites) fed a hypoallergenic diet over an 8-week period (Puigdemont 2003, unpublished data). On the other hand, of 52 dogs with food allergy confirmed by challenge, 12 were considered atopic according to the guidelines described by Willems, and 6 more were confirmed atopic by intradermal skin testing. Among the 6 skin-test positive atopic dogs, half were successfully controlled simply by managing the concurrent food allergy.

Factors Influencing Development of Allergic Conditions

The likelihood of an individual patient developing food sensitivity depends in part on permeability of the gut, the presence of allergy to other foods or inhalants, and other factors. Heredity is a major predisposing factor in allergic conditions in humans. The likelihood of an infant developing atopy or food allergy is 37% if one parent was atopic and 92% if both parents were atopic.

Diets for Dogs with Food Sensitivities

Nestlé Purina offers three diets for dogs with food-related sensitivities. Purina Veterinary Diets™ HA HypoAllergenic™ brand Canine Formula is for use in the dietary management of canine food allergies. Purina Veterinary Diets™ LA Limited Antigen™ brand Canine Formula is designed to aid in the nutritional management of dogs with dermatitis and other skin conditions, and Purina Pro Plan brand dog food Extra Care Sensitive Skin & Stomach Formula is for adult dogs with sensitivities to common dog food ingredients.

As the first truly hypoallergenic diet for dogs with food allergies, Purina Veterinary Diets HA Canine Formula is a perfect diet for elimination trials or for long-term management of dogs experiencing signs of adverse food reaction. HA Formula is made with a soy protein source that has been modified to reduce its antigenicity and ability to elicit an allergic response. As a result, even dogs that are allergic to soy are less likely to have an adverse food reaction. Purina Veterinary Diets LA Canine Formula has high omega-3 fatty acid content and increased antioxidant vitamins and is recommended for dogs suffering from some forms of the following conditions: food-allergic dermatitis, pruritus from atopic conditions and inflammatory skin conditions. Formulated with a limited number of novel protein sources including salmon meal, trout and canola meal, LA Formula is an ideal diet for dogs that are allergic to common proteins, such as chicken or beef. Since fish protein is not normally found in dog food, LA Canine Formula can often make a good long-term diet for food-allergic dogs.

Purina Pro Plan brand dog food Extra Care Sensitive Skin & Stomach Formula is for adult dogs with sensitivities to common dog food ingredients. This diet includes protein sources such as salmon and tuna and highly digestible carbohydrates. Sensitive Skin & Stomach Formula also contains high levels of omega fatty acids for healthy skin and coat.

Vet in Practice

Keeping Pace with Stephen Ettinger

When the sixth edition of the Textbook of Veterinary Internal Medicine comes out in January 2005, author Stephen J. Ettinger, D.V.M., DACVIM, is likely to be already working on several new projects. During the next two years while the two-volume veterinary textbook is being developed — a period that Ettinger describes as “hard work and craziness” — he will keep a full practice schedule and continue to manage the veterinary clinic he helped to develop in 1980, the California Animal Hospital in Los Angeles.

Juggling multiple projects simultaneously is a habit Ettinger has practiced for many years. During the eight years he worked as a cardiology resident and postdoctoral fellow at The Animal Medical Center (AMC) in New York, he held jobs such as supervisor of the weekend clinic, staff cardiologist and assistant head of medicine, while also conducting and writing about cardiology research. During this time, Ettinger also wrote the first textbook in veterinary cardiology. Canine Cardiology was published by W.B. Saunders Co. in Philadelphia in 1970. Thus began Ettinger’s interest in cardiology research.

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Stephen J. Ettinger, D.V.M., DACVIM

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Atopy and Food Allergy
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62% if both parents were affected. This may also be related to the concept of "summation," which suggests that multiple allergies or nonallergic pruritic stimuli additively in effect. Thus, a pruritic dog with concurrent atopy and food allergy, for example, may drop below the pruritic threshold by effective control of only one of these conditions. Nonallergic factors, such as stress, dry skin, hot weather, etc., can also contribute to pruritus via non-immunologic means and must be considered in the identification and management of pruritic pets.1

Summary and Clinical Implications
Atopy and food allergy are relatively common conditions in humans and pets, and may occur concurrently. The immunopathogenesis of atopy has strong similarities among humans, cats, and dogs, and both allergic conditions appear to share a common pathophysiology. Food allergy is identified by response to veterinary supervised elimination and challenge feeding trials. The identification of atopy in dogs and cats is usually considered a process of elimination, confirmed by intradermal or serum testing for suspect allergens. In various studies, a large percentage of atopic dogs responded to a hypoallergenic diet with a clinically significant (up to 100%) reduction in pruritus. This effect may have been due to a reduction in the overall antigen exposure, dropping the animals below their pruritic threshold. This phenomenon may make the identification more difficult, but can make management easier.

Thus, the use of a hypoallergenic diet may prove useful not only in the identification and management of food allergy, but also in the management of atopy. In some atopic patients, feeding an appropriate hypoallergenic diet may be adequate to significantly reduce the clinical signs associated with pruritus.6

Written by Nestlé Purina Senior Research Scientist D.P. Laflamme, DVM, PhD, DACVN, and reprinted from the Nestlé Purina Research Report, Volume 7, Issue 2.

References

It’ Your Call

The Patient
Signalment: “Bob,” a 1 year and 11-month-old neutered male, American Foxhound mixed-breed dog, 60.4 lbs.
History: Two to three months of diarrhea, punctuated by occasional vomiting, good appetite.
Clinical Signs: Blood-streaked diarrhea and vomiting. Patient is bright and alert.

Identification of Condition
Test Results: Fecal flotation: negative; CBC: unremarkable.
Preliminary Identification: Gastroenterocolitis of undetermined origin.
Prescribed Treatment: Amoxicillin, aminopentamide, prednisolone, Metamucil™, Imodium™ A-D caplets, metronidazole and dietary changes.
Response: After four months, response to treatment was variable and unsustained.
Pathologist’s Notes: Colitis was substantial and consistent with inflammatortbowel disease (IBD) or idiopathic muralis colitis. IBD is an idiopathic condition characterized by dysregulation of the normal gastrointestinal mucosal system. The infiltrate has a prominent eosinophilic component.

Treatment Plan
Nutritional Management: Patient was put on Purina Veterinary Diets™ H/A HypoAllergenic™ brand Canine Formula.
Response: Patient has been asymptomatic for two years, without any pharmacological intervention.
Note: As the co-star of a comedy act called Circus Circus in Reno, Nev., Bob has an important role that requires him toainted TW with his coat looks great, he has good muscle tone, and he’s full of energy. The food saved Bob’s life, and it saved the act.”

John Tiedjens, and Bob

From the University of Georgia Nestlé Purina Veterinary Communications Manager

From the University of Wisconsin Nestlé Purina Veterinary Communications Manager

From the University of Illinois As one of the sponsors of the SAVMA Regional Economics Symposium, Nestlé Purina PetCare is providing conference binders for attendees.
Patrolling for Pudgy Pets

In their visits with dog owners, Delgado and two veterinary technicians addressed the hazards of allowing pets to gain too many pounds. They also performed Nestle Purina Pet Life Condition System (BCS) evaluations and sent owners home with BCS charts, an education brochure on pet obesity, and coupons for Purina Veterinary Diets brand Canine and Feline Formulas.

Among the key points the Pet Pound Patrols delivered to pet owners:
- **Check for Obesity:** Ask your veterinarian for help in recognizing signs of obesity in your dog and use the Nestle Purina Pet Body Condition System to see if your dog is too heavy, too thin or at an ideal body condition.
- **Follow a Nutrition Plan:** You and your veterinarian can create a nutrition plan that feeds your dog to his ideal body condition. Refer to the Purina Life Plan on the back of many Purina product packages to help you adjust feeding amounts as your dog’s activity level and body condition change.
- **Measure each Serving:** Don’t just fill up your dog’s bowl at each feeding. Follow the feeding guidelines on the back of Purina packages to give your dog the proper serving size for his ideal body condition.
- **Limit Treats:** Shower your dog with love and attention instead of too many high-calorie treats, especially table scraps. Be mindful of the quality and quantity of treats you feed each day — calories add up quickly.
- **Get Moving:** Daily exercise is one of the keys to your dog’s health. Just 20 minutes of walking or playing fetch each day can help keep your dog fit. Be sure to check with your veterinarian before changing your dog’s exercise routine.

For nutritional information or answers to questions about Purina Veterinary Diets™ brand Canine and Feline formulas, you may call the Purina Veterinary Resource Center at 1-800-222-VETS (8387) weekdays from 8 a.m. to 4:30 p.m. CST.

Newfoundland named “Seaman” accompanied Meriwether Lewis and William Clark on their historic expedition. Just like in the original journey, a modern-day Newfoundland is part of the Lewis and Clark re-enactment team. Sponsored by Nestle Purina PetCare, the modern-day Seaman is an all-black, 10-month-old puppy weighing 120 pounds, well on its way to an adult weight of 160 to 170 pounds. As the official sponsor of Seaman, Nestle Purina PetCare is providing Purina Pro Plan brand dog food for the Newfoundland throughout the commemorative expedition.

Did You Know?

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Nestlé Purina PetCare company is hosting two national conferences in 2004. The Nestlé Purina Nutrition Forum is scheduled for Sept. 25 to 28 in St. Louis, Missouri. This forum will focus on Nutritional Advances in Gastrointestinal Health and Disease, and The Aging Feline: Advances in Nutrition and Care for the Older Cat. About 250 veterinary nutritionists, technicians, scientists, and veterinary students and residents are expected to attend the international conference.

The American Kennel Club (AKC) Canine Health Foundation National Parent Club Canine Health Conference was held Sept. 19 to 21 in St. Louis, Missouri. The fifth biennial conference featured talks by some of the top canine health researchers across the country. Attended by about 200 people, the conference is held for representatives of parent breed clubs of dogs registered by the AKC.

Vet in Practice — page 1

Ettinger enrolled for a bachelor’s degree in animal husbandry at Cornell University in Ithaca, N.Y., where six years later he graduated from veterinary school. Inspired by the teaching of mentor Robert W. Kirk, Ettinger switched his focus to small-animal medicine during his third year of veterinary school.

Always wanting to live in California, Ettinger moved to the West Coast after completing his postdoctoral fellowship at AMC. And in 1971, he opened the first multi-doctor group veterinary specialty practice in the country in Berkeley, Calif. The Berkeley Veterinary Medical Group included specialists in cardiology, medicine, dermatology, surgery and radiology.

Stu still juggling multiple projects, he also was a lecturer, and later a clinical professor, the first at the University of California-Davis. During this time, Ettinger had the opportunity to again work with Peter Suter, a colleague from AMC, who was co-author of the book “Canine Cardiology.”

The California Animal Hospital in Los Angeles, where Ettinger has practiced since 1980, is a multispecialty practice with 35 veterinarians and offers a 24-hour emergency service. Ettinger manages the practice and oversees the internship and residency programs. “I enjoy the work,” he says, acknowledging that his driven personality has always kept him very busy.

But, Ettinger always makes time for his family of five children and numerous hobbies, including photography, bicycle riding, traveling and reading, “I wouldn’t change very much about my life,” he says, “except maybe try to extend the day a bit to 26 hours.”

Nestlé Purina to Host Second College Challenge At 2004 NAVC

Nestlé Purina PetCare will host the second annual College Challenge at the 2004 North American Veterinary Conference in January in Orlando.

Veterinary students who are selected as delegates will vie for educational grants and matching donations that will be given to their school’s Student Chapter of the American Veterinary Medical Association (SCAVMA). All contestants will receive $100 for participating.

The Challenge will include a series of multiple-choice questions about veterinary medicine. Advancement is based on points accumulated in each round. To be eligible for the grand prize, contestants must participate in round one on Saturday morning, Jan. 17, and the final round on Tuesday evening, Jan. 20.

The grand prize winner will receive a $3,000 educational grant and a matching donation of $3,000 will be awarded to the student’s university.

Student Getaway at AVMA

Veterinary students who attended the American Veterinary Medical Association conference in July in Denver shared lunches and relaxed at the Nestlé Purina student lounge. A record 367 veterinary students attended the conference, which included a special veterinary college student program. Magazines, movies, comfortable furniture, board games, Nestlé cany, and giveaways were provided at the Nestlé Purina student lounge.

Nestlé Purina Sponsors National Conferences

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The third annual Genes, Dogs and Cancer conference, presented by the AKC Canine Health Foundation, was held Sept. 5 to 7 in Seattle. About 80 scientists, veterinarians and breeders attended the international session in which talks on a wide range of cancer research were presented.

The Conference on Homeless Animal Management & Policy (CHAMP) took place July 31 to Aug. 3 in St. Louis. Geared to employees of animal shelters, the conference provided information on topics such as foral cat programs, crisis management, and adoption policies and procedures.

Getting Doggy at Tufts

The Purina Incredible Dog Team, above, thrilled the crowd with its amazing stunts and flying disc performance at open house Sept. 6 at Tufts University School of Veterinary Medicine in North Grafton, Mass. About 8,000 people from the area attended the event. In the photo below, Nestlé Purina Student Representative Melissa Donnelon, left, and Nestlé Purina Sales Representative Nicole Vineira were on hand at the Nestlé Purina booth to answer questions and hand out gifts.