METROPOLITAN VETERINARY ASSOCIATES
NEWSLETTER
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SPOTLIGHT ON CANINE ADULT GENERALIZED DEMODICOSIS

By Dr. Karen Farver DVM, DACVD

Canine adult generalized demodicosis is a noncontagious parasitic follicular skin disease associated with a genetic or immunologic disorder. It occurs when a dog, older than 18 months of age, has involvement of four or more focal areas of the feet and greater than 2 cm in diameter. This disease allows mites that are normal skin inhabitants to proliferate in the hair follicles and sebaceous glands. It causes alopecia, erythema, comedones, furunculosis, and secondary infections.

> "NORMAL SKIN INHABITANTS TO PROLIFERATE IN THE HAIR FOLLICLES AND SEBACEOUS GLANDS"

WHICH PATIENTS SHOULD YOU EVALUATE FOR DEMODEX?

If they have the following distribution:

- The face
- The feet
- The entire body surface

If they have known detectable underlying disease causing underlying immune suppression or are on immune modulating drugs. 44% percent of dogs have identifiable causes.

Common causes including:

- Glucocorticoids (even topicals eye drops may affect local periocular demodicosis)
- Ciclosporin
- Oclacitinib maleate
- Chemotherapy
- Systemic disease (e.g. hyperadrenocorticism, hypothyroidism, neoplasia, malnutrition, parasitism)

DIAGNOSTIC ANALYSIS

Work up to consider in adult onset demodicosis with no known trigger:

- Complete blood count
- Serum biochemical profile
- Urinalysis
- Heartworm and fecal tests
- Lymph node aspirates
- Thyroid and adrenal testing
- Abdominal ultrasound
- Chest radiographs

HOW TO SAMPLE?

- Scrape-Deep till you get capillary bleeding
- Trichogram from around the eye
- Sharpei's — You may need to biopsy
- Tape acetate preparation, squeeze for 5 seconds first

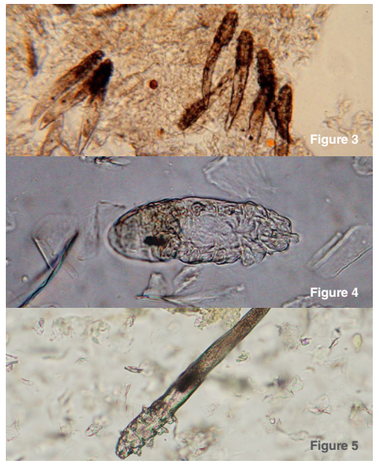

Dr. Karen Farver


Figure 1


Figure 2

Demodectic-Pododermatitis: on a Bulldog (Figure 1)
Demodex: whole body (Figure 2)

DRUG	DOSAGE	ADVERSE EFFECTS	EVIDENCE FOR USE/SAFETY INFORMATION
Ivermectin (Ivomec 1%,)	0.3–0.6 mg/kg PO Q 24 hour Liquid, reportedly taste bitter	Lethargy; vomiting; neurologic signs: such as tremors, mydriasis, ataxia, coma, death	• Many studies showing good evidence for use • Do not use in herding breeds and their crosses or dogs with confirmed ABCB1-1Delta (MDR-1) gene mutation • Do not use concurrently with spinosad (Comfortis and Trifexis) due to resulting severe neurologic adverse effects • Use with caution with other p-glycoprotein inhibitors such as azoles.
Afoxolaner (Nexgard, Merial)	1 tablet PO Q 2 – Q 4 weeks with or without food	vomiting 4.1% anorexia 1.2% diarrhea 3.1%, lethargy 1.7%, dry/flaky skin 3%	• A study evaluated it administered bi-weekly on days 0, 14, 28, and 56, in 8 dogs with generalized demodicosis. Dogs treated with afoxolaner had lower mite counts after treatment (99.2%, 99.9%, and 100% on days 28, 56, and 84, respectively) • Dogs ≥ 8 weeks of age • Labeled to use with caution in dogs with history of seizures • Safety has not been evaluated in breeding, pregnant or lactating dogs
Fluralaner (Bravecto, Merck)	1 tablet PO Q 12 weeks for best absorption give with food	vomiting, diarrhea, anorexia, flatulence, lethargy reported in 1%	• A study evaluated (single dose) in 16 dogs with generalized demodicosis. Dogs treated with fluralaner had lower mean mite counts after treatment (99.8% on day 28, and 100% on days 56 and 84) • Dogs ≥ 6 months of age • Labeled safe for use in breeding, pregnant, and lactating dogs • Study showed safe for use in dogs with ABCB1-1Delta (MDR-1) gene mutation, such as collies
Sarolaner (Simparica, Zoetis)	1 tablet PO Q 4 weeks best to give with food	vomiting 0.9%, diarrhea <1%, lethargy <1%;	• A study evaluated efficacy (doses on days 0, 30, and 60) for the treatment of 16 dogs with generalized demodicosis for 91 days. The study showed that dogs treated had significant mite count reduction after the first dose (97.1% and 99.8% at days 14 and 29, respectively), with no live mites detected at 44 days and thereafter. • Dogs ≥ 6 months of age • Safety has not been evaluated in breeding, pregnant, or lactating dogs • Study showed safe for use in dogs with ABCB1-1Delta (MDR-1) gene mutation, such as collies • Caused dose dependent neurologic signs, including tremors, ataxia, and seizures at 3x dose and 5x dose in some cases



Three different types of Demodex mites exist in dogs:

Demodex canis: the most common form of Demodex (Figure 3)

D cornei: a short-body form, likely a morphological variant of D canis4 (Figure 4)

D injai: a long-body form1-3 (Figure 5)

UPDATE ON TREATMENTS

The only labeled treatment for canine demodicosis is Amitraz. Extra-labeled treatments used include doramectin, milbemycin, moxidectin, moxidectin and immidaclopramide, and ivermectin.

Recently Isoxazolines have been shown to be effective for generalized demodicosis. They are labeled for the prevention and treatment of flea and tick infestations in dogs.

The ***table above*** compares the different Isoxazolines to ivermectin.

MONITORING TREATMENT

1. Perform skin scrapings every 4 weeks to monitor response. Continue treatment until 2 consecutive negative skin scrapings are obtained.

2. If there is minimal reduction in mite numbers and/or substantial eggs, larvae, and nymphs still seen at recheck, reinvestigate for the presence of underlying causes or consider an alternative treatment.

3. If there is a low mite count, but still significant clinical disease, investigate concurrent skin infections. Secondary bacterial and yeast infections are commonly associated with canine demodicosis. therapy or have a history of multiple antibiotic courses.

4. Relapses have been reported in 10% to 45% of patients. Monitor patients after treatment is discontinued, every 3 to 6 months the first year. The largest percentage of recurrence of disease occur within the first months after treatment discontinuation.

5. In patients with refractory demodicosis, treatment may be lifelong.

UPCOMING CONTINUING EDUCATION

Veterinary Practice Management

Open to veterinarians and practice managers / administrators

Date: Tuesday, September 26, 2017
Time: Registration and Lunch 1pm | Seminar Begins 2pm
Where: Pomme | 175 King of Prussia Road | Radnor
Credits: Approved 4 CVPM credits
Speaker: Terence M. O'Neil, CPA, CVA – Katz, Sapper & Miller

This engaging seminar from Terry O'Neil – a leader in veterinary practice management – focuses on issues key to the success of a busy hospital. Topics include:

- Veterinary Hospital Financial Benchmarks: National Trends That Lead to Profitability
- Key Performance Indicators (KPIs): Compiling Your Hospital's KPIs into an Effective Management Tool
- Managing Labor and Direct Costs: Stop Chasing the Pennies and Save a Dollar
- Internal Controls: Protecting Your Hospital from Becoming a Victim Profit Enhancement: Leading Your Team to Improve the Bottom Line

Money is Not a 4-letter Word

Open to your veterinary team

Date: Thursday, November 2, 2017
Time: Registration and Dinner 6pm | Seminar Begins 7pm
Where: Columbia Station | 4 Bridge Street | Phoenixville
Credits: To be announced
Speaker: Karen Stasiak, MSN, DVM, Regional Strategic Veterinarian – Zoetis

Financial concerns are one of the most common and uncomfortable conversations in a veterinary setting. Designed to help your team have productive exchanges with clients, the lecture will cover topics such as: how to talk about finances; useful communication techniques; psychology of decision making; DISC/EQ assessment; and teamwork and conflict resolution.

FOR MORE INFORMATION AND TO REGISTER VISIT METRO-VET.COM/CE

SPECIALIZED SERVICES

CARDIOLOGY
Marc Kraus, DVM, DACVIM (Cardiology)
Michael Miller, MS, VMD, ABVP
Risa Roland, DVM, DACVIM (Cardiology)

DENTISTRY
Corinne Durand, DVM

DERMATOLOGY
Karen B. Farver, DVM, DACVD

EMERGENCY AND CRITICAL CARE
James Buckman, PhD, VMD
Allison Buysse, VMD
Jason Chamberlin, VMD
Robert Gaunt, VMD
Lydia Gentry, DVM
Katherine E. Hoff, DVM
Jennifer McGough, VMD
Rachel Morgan, DVM (Practice limited to E/CC)
Marisa Suvannavejh, VMD

INTERNAL MEDICINE
John V. DeBiasio, DVM, DACVIM
James F. Dougherty, MS, VMD
Tabitha A. Hutton, DVM, MTR, DACVIM (SAIM)
Leslie A. Kuczynski, VMD, DACVIM

INTERVENTIONAL RADIOLOGY
Risa Roland, DVM, DACVIM (Cardiology)

MINIMALLY INVASIVE SURGERY
John V. DeBiasio, DVM, DACVIM
Leslie A. Kuczynski, VMD, DACVIM

NEUROLOGY
Melissa Logan, PhD, DVM, DACVIM (Neurology)

ONCOLOGY
Suzanne Rau, DVM, DACVIM (Oncology)

OPHTHALMOLOGY
Amanda Corr, VMD, DACVO
Stephen L. Gross, VMD, DACVO

RADIOLOGY
Robert McLear, VMD, DACVR
Lisa Suslak, VMD, DACVR

SURGERY
Lori W. Cabell, DVM, DACVS
Kendra Hearon, VMD, DACVS-SA
A. Jon Nannos, DVM
Jacqui Niles, BVETMED, SAS, DACVS
Catherine Popovitch, DVM, DACVS, DECVS
Timothy M. Schwab, VMD, DACVS-SA
Rebecca Wolf, VMD, DACVS-SA

MEET OUR NEW DOCTORS

SURGEON

KENDRA HEARON | VMD, DACVS-SA

Joining MVA in August, Dr. Kendra Hearon is a Penn Vet graduate, Diplomate of the American College of Veterinary Surgeons, and ACVS fellow of Surgical Oncology. After completing her fellowship at Colorado State University, Kendra helped start the Comprehensive Cancer Care at the University of Pennsylvania, and then went on to help create a similar cancer center at the Animal Specialty Center in New York.

CRITICAL CARE

RACHEL MORGAN | DVM

In September, Dr. Rachel Morgan will join MVA's emergency team. She received her Doctorate of Veterinary Medicine degree from the University of Minnesota's College of Veterinary Medicine. She completed a one year rotating internship at Burlington Emergency and Veterinary Specialists, a one year specialty internship in emergency and critical care at Massachusetts Veterinary Referral Hospital, and a three year residency program in emergency and critical care at the Oradell Animal Hospital. Her interests within emergency medicine include trauma, coagulopathies, endocrine emergencies, and toxicology.

EMERGENCY

JAMES BUCKMAN | PhD, VMD

We are thrilled to welcome Dr. Buckman back to MVA's emergency service, starting in September! Dr. Buckman studied at University of Pennsylvania and has worked extensively in emergency and critical care medicine. He also completed a PhD in biochemistry at the University of California prior to going to veterinary school. He is focused on evidence-based medicine and is experienced in emergent surgical and medical issues as well as complex chronic diseases.

PET LOSS SUPPORT GROUP

Here, we all understand the depth of loss one experiences when a beloved four-legged family member has passed. For that reason, Metropolitan provides a Pet Loss Support Group to help grieving owners in need. Our pet group is designed to provide grieving pet parents with a safe, confidential environment to share their feelings with others who have experienced pet loss.

The group is operated by vets and veterinary nurses who have experience with pet loss. A board certified psychiatrist consults with us regarding the implementation of the group, however, our group leaders are not mental health care professionals. Clients experiencing difficulty coping are urged to seek help from a mental healthcare professional. We can provide you with the names of health care professionals if needed.

Our Pet Loss Support Group meets on a varying schedule. **For dates please call the hospital at 610.666.1050 or visit metro-vet.com/petloss.**