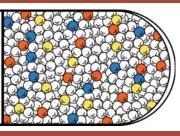
"Pearls" Veterinary Medicine





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AT A GLANCE

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Post-grooming furunculosis

A 2-year-old crossbreed German shepherd dog was presented for lethargy, pain, anorexia, and rapidly progressing skin lesions. The lesions, which were predominantly on the dorsal and lateral aspects of the thorax and gluteal region, were compatible with post-grooming furunculosis. The owner reported that the dog's lethargy, pain, and anorexia developed within 24 hours of bathing and that skin lesions developed 1 day after the onset of systemic signs. The dog had been bathed in a nonmedicated, overthe-counter shampoo, most of which came from a bottle purchased 7 months previously. Post-grooming furunculosis is increasingly being recognized as an important clinical entity. A recent case report described a dog with post-grooming furunculosis that developed sepsis and multiorgan failure that led to death. Many things can cause an acute onset of fever, anorexia, and lethargy, but key clues suggesting post-grooming furunculosis include pain and widespread skin lesions with a predominantly dorsal distribution. Clinicians should always ask about recent bathing, as not all owners will think of this information as important. Hair trichograms should be performed to rule out demodicosis, and cytology should be used to look for intra- and extracellular rods. The finding of rods on skin cytology from a pyoderma are worrisome, as cocci are the expected finding.

Karen A. Moriello, DVM, DACVD WSAVA Clin Brf, 15:1

Spring loaded moth gags not good in cats

Feline anatomy is unique in that the internal carotid artery is functionally absent; thus, the blood supply to the brain, retina, and inner ear is largely supplied by the maxillary artery. The maxillary artery is located at the caudal aspect of the mandible and between the tympanic bulla and angular process of the mandible. Spring-loaded mouth gags can cause altered blood flow to the maxillary artery. Therefore, mouth gags— especially spring loaded mouth gags—that fully extend the mouth are *not recommended* in cats because of the risk for ischemia. Blindness and neurologic signs secondary to ischemia can be temporary or permanent. It is recommended to use caution in cats when opening the mouth widely, and the duration the mouth is open should be minimized as much as possible. Justin Fraser, BSc and Shelly J. Olin, DVM, DACVIM

WSAVA Clin Brf, May 2018

Worth noting—

Few people think a snack bag could suffocate a dog or a cat, until the unthinkable occurs. The dog or cat puts its head inside a bag of chips or another snack, and the bag tightens when the pet inhales. The pet can suffocate to death in under five minutes. According to one survey, 72% of dogs or cats suffocated in chip or snack bags. Suggestions are to store food in plastic containers with an opening too small for a pet's head, serve snacks in a bowl rather than eating them out of a bag, and cut bags along one side and the bottom before disposal. Preventive Vet has dedicated a webpage to awareness at www. preventivevet.com/petsuffocation, where the free poster, shareable materials for social media, and other resources are available.

JAVMA, May 15, 2018

Diagnosing the pruritic dog

A minimum data base should almost always include skin scraping - deep and superficial, dermatophyte culture, and surface cytology. Site selection and test interpretation is very important with the above simple but important tests. When in doubt, consider the following. * With a papular pruritic disease - treat for sarcoptic mange. * With a papular pruritic disease that is anywhere on the back half of the dog - place on complete flea control (sometimes puppies and young Labradors can have total body disease early on). * With a papular pruritic disease that can be pustular

The Capsule Report.

- treat with a good skin antibiotic and note response... may need culture if there is a history of long term previous antibiotic use. * With a pruritic disease where yeast is seen on cytologic evaluation, treat minimally with topical anti-yeast agents (if severe,

systemic therapy is warranted). If minimal response is seen after the appropriate length of time, consider allergic disease as a cause of the pruritus. Thus - treat for scabies, flea allergy, and treat secondary infections. If disease remains, the "pure" clinical manifestation of the pruritic disease can be appreciated. Next step: discuss symptomatic therapy vs. allergy work up to include food trial, intradermal skin testing/in vitro testing or less likely consider patch testing for contact allergy.

Sandra R. Merchant, DVM, DACVD SW Vet Symp, 09:17

Link tick-born disease with CKD

In this white paper by IDEXX, dogs with antibodies to *Borrelia burgdorferi*, the Lyme pathogen, were found to have a 43% higher risk of developing CKD. Dogs with antibodies to *Ehrlichia* species had a 300% higher risk of developing CKD if they lived in *Ehrlichia canis*-endemic areas (those patients not located in endemic areas did not show increased risk of CKD with *Ehrlichia* exposure). The results were statistically significant and clinically relevant. Regular monitoring of these seropositive patients is medically necessary. The study supports that dogs who test positive for Lyme disease or *Ehrlichia* are associated with a statistically significant increased risk of developing CKD in endemic areas. Consequently, patients of any age that test positive for Lyme disease or *Ehrlichia* should be considered for comprehensive evaluation.

DVM News Mag, May 2018

Foxes are becoming popular

Domesticated foxes have been a thing for a while. They haven't reached fad status like hedgehogs yet, but they're lovely creatures and, with proper care and knowledge, can make good pets. There are different kinds of domesticated foxes that people can purchase for their own, and they're all a little bit different. Fennecs are super-cute and communicative; red foxes are more reserved. Keep in mind that most native wildlife—which includes some species of fox, but not the fennec—are illegal to keep as pets in most states without proper permits. There are several websites that discuss fox ownership (faithfulfoxeds.com, fennecfoxes.net). Foxes should be vaccinated with the canine rabies vaccines, and kits should be 16 weeks old before they're vaccinated for rabies. The authors recommend keeping them on a oneyear rabies vaccine schedule. If the fox bites someone, the public health department won't recognize the vaccine in most cases and the fox will be treated as unvaccinated, so advise your client accordingly. It doesn't mean the vaccine doesn't work in these species; it just hasn't been

tested and shown to be effective. (Ed. Note—more on foxes in a future issue.)

Jennifer Chatfield, DVM, DACZM and Olivia Petritz, DVM DVM News Mag, May 2018

Steroids contraindicated in head trauma

Glucocorticoids were previously advocated for the treatment of brain injury due to the fact that they decreased cerebral edema. However, there is very little evidence in human patients to support the administration of glucocorticoids in acutely brain injured patients. The use of glucocorticoids has been associated with hyperglycemia, which is a poor prognostic indicator in human patients with traumatic brain injury (increased mortality). The CRASH trials also showed that high doses of methylprednisolone was associated with an increased mortality 2 weeks and 6 months after injury. Glucocorticoids are absolutely contraindicated in any animal that presents in head trauma. Those animals should be treated with pain medications, fluid therapy, hyperosmolar therapy (mannitol or hypertonic saline) and nursing care protocols appropriate to minimize increases in intracranial pressure

Adesola Odunayo, DVM, MS, DACVECC AVMA Conf, 07:17

Topical therapy for pyoderma

Topical therapy, using antibacterial agents with proven anti-staphylococcal efficacy, is the recommended treatment for any surface and superficial pyoderma involving MRS, particularly those with localized lesions, and for otitis and superficial wound infection. A systematic review of topical therapy for canine skin infections concluded that there was good evidence to support the use of shampoos containing 2%-3% chlorhexidine and to a lesser extent of benzoyl peroxide in bacterial skin infections. Other topicals with efficacy include miconazole, fusidic acid, mupirocin and polymyxin B. Topical therapy should be used as the sole on-animal antibacterial treatment for surface and superficial infections whenever a pet and owner can be compliant. Although many specialists and practitioners recommend systemic antimicrobial therapy for superficial pyoderma with or without added topical medication, this recommendation should be questioned due to increasing antimicrobial resistance. Newer studies have provided evidence that topical therapy as the sole antibacterial treatment can be effective in superficial pyoderma, providing opportunity to reduce the need for systemic therapy.

Ashley Bourgeois, DVM, DACVD Fetch San Diego, 12:17

Hip dysplasia, check the knees also

Michelle Powers, DVM, DACVS, showed in a classic article that one-third of dogs referred to a surgeon for hip dysplasia have in fact a torn ACL. Almost half of the dogs that were in the study were Labrador Retrievers, German Shepherds, and Golden Retrievers. Radiographs did indeed show hip dysplasia in 94% of these dogs, but the dog's pain in one-third of patients was in

the knee. It is important to rule out other sources of stifle joint disease before making recommendations for treatment of hip dysplasia. Clinical signs may be absent in at least three-fourths of dogs with radiographic evidence of the hip dysplasia. With hind-leg lameness, perform a thorough orthopedic exam of all joints, and radiograph both the hips and the knees. Remember, as the saying goes, "We don't treat X-rays; we treat dogs." Assume that a dog with hind limb lameness has a stifle issue until proven otherwise.

Phil Zeltzman, DVM, DACVS Vet Pract News, Jun 2018

Amicar for post-op bleeding in Deerhounds

In a retrospective study of greyhounds published in 2012 in which records were evaluated for 46 retired racing greyhounds that underwent amputation between 2003 and 2008 for treatment of osteosarcoma, delayed postoperative bleeding was less frequent in dogs that got Amicar than in dogs that did not. In fact, a dog was about six times less likely to experience delayed postoperative bleeding if given Amicar. Three years ago this author recommended that Deerhound owners adopt the same approach for their dogs. Every Deerhound that undergoes surgery should be given Amicar for the next 3-5 days to reduce the risk of delayed postoperative bleeding. Amicar is available in 500-mg scored tablets. Doses should be given three times a day, approximately eight hours apart. The dose level should be as follows: 55-79 lb—500 mg (1 tablet); 80- 104 lb—750 mg (1 1/5 tablet); >105 lb—1000 mg (2 tablets). Dose every 8 hours.

John E. Dillberger, DVM Vet Pract News, Jun 2018

Adrenal gland hyperplasia of ferrets

Adrenal gland hyperplasia or neoplasia is one of the most common diseases of ferrets and most often affects middle-aged ferrets, particularly those between 3 and 4 years of age. Affected ferrets frequently display symmetrical hair loss, which usually begins on the back and/or tail. Spayed ferrets can have vulvar enlargement. Male ferrets can develop prostatomegaly and secondary dysuria, stranguria, anuria, and/or urinary obstruction. Male and female ferrets may display increased sexual behavior or aggression. Clinical signs can be used to make a presumptive diagnosis, which can be confirmed with an adrenal panel (available at University of Tennessee Veterinary Medical Center [utmedicalcenter.org]). Surgical resection of adrenal glands and pharmacologic treatments are common approaches for treating hyperadrenocorticism. For ferrets that are good surgical candidates, surgery not only alleviates the clinical issue but also enables evaluation for other abdominal diseases (e.g., insulinoma). Among pharmacologic options, deslorelin acetate implants have proven effective and are relatively convenient, which can improve owner compliance. Based on recent studies showing that ferrets medically treated with deslorelin had longer relapse times as compared with those treated surgically, deslorelin acetate implants

have been recommended as a first-line treatment.

Kvin Lertpiriyapong, DVM WSAVMA Clin Brf, 15:2



Pre-op fluids, new recommendations

If there is one point that is commonly forgotten with fluid therapy decision making, it is that fluids are drugs! Like all drugs, fluids have indications, contraindications, benefits, risks, and unplanned adverse effects. As a result, fluid therapy should only be given when clinically necessary. In the past, many clinicians have taken the mindset of "if they don't need the fluid, "they will just pee it out." However, even in healthy patients, unnecessary fluids have negative consequences. This is best illustrated through our changing paradigm of fluid therapy during anesthesia. In the past, pre-anesthetic fluid loading and/or high intra-operative fluid rates (10) ml/kg/hr) were administered in a theoretical attempt to prevent hypotension. Not only do these practices NOT prevent hypotension as compared to lower anesthetic fluid rates, but they actually increase the risk for hypervolemia post-op. Post-operative hypervolemia has been associated with increased rate of complications such as surgical site infections, decreased wound healing, GI ileus, pneumonia, and pulmonary edema. As a result, current recommendations are to administer lower anesthetic fluid rates of 3-5 ml/kg/hr and bolus fluids only as needed for hypotension if it occurs.

Marc Seitz, DVM, DABVP Music City Vet Conf, 02:17

Pseudomonas otitis

Once the cleaning is done, these dogs usually feel much better. There are a number of topical treatments that can be sent home for continued ear treatment. This author usually continues the oral steroids for an additional 2 – 4 weeks. tapering the dose. A very useful topical ear treatment for many dogs with Pseudomonas is high concentration enrofloxacin in Tris EDTA ear wash. Even if the Pseudomonas is reported as resistant, it is important to remember that these sensitivities and resistances are based on achievable blood levels by oral or systemic administration. Putting a high concentration of enrofloxacin directly onto the bacteria can be very effective, especially after the biofilm has been disrupted. The final concentration is 10 mg/ml of enrofloxacin, so Large Animal Injectable Baytril (100 mg/ml) is recommended. It is easy to take a 4 oz bottle of T8 or Tris EDTA and subtract 12 ml; then add back 12 ml of Baytril. This is a 1:10 dilution. The author usually doesn't add steroid to this, but you can. Generally injectable dexamethasone is added so that there are 6 mg of dexamethasone per oz. The instructions to the client are to fill the ear canal twice daily.

> Valerie A. Fadok, DVM, PhD, DACVD Atl Coast Vert Conf, 10:16

Anticoagulant rodenticide toxicity

Anticoagulant rodenticide (AR) toxicity can present in

any number of ways, depending on the site of bleeding. Additionally, many pets will present after ingestion but not be showing clinical signs. It is important in these cases to ascertain whether exposure could have occurred in the past, or if this is the first possibility of exposure. Additionally, the owners may not be aware (or may not be forthcoming) of a pet's possibility for exposure. It is important not to rule out AR intoxication because an owner claims that they do not know of any exposure. Patients may show no clinical signs for several days after ingestion, as it takes time for clotting factors to be used up. Patients who have ingested an AR within the prior 1-2 hours but have no clinical signs should undergo general decontamination. If there is a possibility of prior exposure, coagulation assays should be run, preferably in-house if available. If there is no possibility of prior exposure and PT/PTT are within normal range, the patient may be treated as an outpatient with 2.5 mg/kg vitamin K1, PO, q12h, for 4 weeks after decontamination and activated charcoal administration. The PT and PTT should be assessed 2-3 days after starting therapy to make sure the dose is sufficient and 2-3 days after cessation of therapy to ensure that they were treated long enough. Elevated PT/PTT should prompt either a dose increase or extension of the vitamin K.

Tony Johnson, DVM, DACVECC SW Vet Symp, 09:17

Tritrichomonas in the cat

Cats may develop large-bowel diarrhea associated with the presence of trichomonads in the feces. The disease appears more commonly in young, purebred cats obtained from a cattery or shelter. Patients act and eat well, but have intermittent to persistent diarrhea. The diagnosis may be confirmed by direct fecal examination. Fresh stool is mixed with 0.9% saline and examined at both 100x and 400x. Use of tap water will rapidly destroy the trichomonads. Tritrichomonads can be differentiated from Giardia trophozoites by their rapid forward motility. Negative fecal examination does not exclude the diagnosis; PCR testing is more sensitive and specific than pouch culture. The best treatment for trichomoniasis is unclear. Response to metronidazole (30 mg/kg/d) is common, but so is relapse. Paromomycin has been associated with renal failure and should not be used. Ronidazole is currently the treatment of choice at 30 mg/kg, q12-24 hours (stop at first sign of neurologic toxicity). High fiber diets (Hills W/d or R/d) may be helpful. The disease may self-resolve with age. Tritrichomonas may be associated with diarrhea in dogs, but information is still scarce.

> Michael Stone, DVM, DACVIM 40th MNEVS Conf 2018

Removing the negatives of patients entering your clinic

If you want to see first-hand one of the problems our profession faces, spend a couple of hours on a clinic stake-

out. Park your car outside a couple of veterinary hospitals and watch pet owners enter the practice. You'll witness them trying to coax dogs to enter or carry them inside. Then park outside at a few local pet stores and watch dog after dog tow their owners into the shop with enough power to pull them on water skis. Did you know that feces from dogs experiencing stress contain fear pheromones (anal gland secretions on the feces) that alert other dogs of danger? If you don't want the steaming equivalent of flashing red lights lining the sidewalk on the way into your practice, you must search out and pick up feces several times a day and seal them shut in a disposal bag-don't just toss them into the trash. Thoroughly clean up anal gland expressions in the exam room. Vertical surface just outside your front door, portico, or building corner probably has thousands of invisible signs that scream danger to dogs as they stop, sniff, and check "pee-mail" before entering the clinic. Clean vertical surfaces with a solution like Rescue (accelerated hydrogen peroxide) at least once daily, and pressure wash/ steam clean monthly. Spritz the area with pheromones several times a day—doing so can turn a negative into a positive.

> Marty Becker, DVM Vet Pract news, Jun 2008

Medical management of insulinoma

Medical management is aimed at hypoglycemia control and is recommended for dogs with metastatic disease or for which the owners decline surgery. Specific anticancer therapies were discussed in this case report but were declined in favor of starting empiric medical management with dietary therapy (4-6 small meals per day of boiled chicken and turkey plus a prescription fiber-balanced diet) and corticosteroids (prednisone 1 mg/kg, q24h) for their gluconeogenesis effect. The patient's quality of life was well managed with this regimen for approximately 6 months, at which time recurrence of hypoglycemic seizures prompted the decision for humane euthanasia.

Christine Mullin, VMD, DACVIM and Craig Clifford, DVM, MS WSAVA Clin Brf, 15:9

Credible websites for cannabidiol (CBD)

This author usually refer his clients to peakvets.com because it provides the CBD concentration (making it easier to dose). CBD oils made via carbon dioxide extraction are best. The dosage this author uses for both dogs and cats is 0.02 to 0.1 mg/kg orally, twice a day. Other good websites that just give a dosage based on whether the pet is small or large are canna-pet.com, cannacompanionusa.com, treatibles.com, rxvitamins.com and vetcbd.com.

Andy Rollo, DVM Vetted, May 2018

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www.CapsuleReport.com; capsed1@gmail.com

Making the ride to the vet less stressful

Cats are most stressed by the car ride into the clinic. And before the car ride even starts, there is the stress of being chased down and stuffed into a carrier. The carrier can and should be a safe-haven for the cat. Although this can be accomplished at any age it is best to start out when they are just kittens. Using the carrier to hold a soft bed, keep toys in and give treats in will acclimate cats to that carrier, making it a home-away-from-home on the trip to the veterinarian. For those cats that are still stressed, or have not been acclimated to the carrier, they can be treated with medications prior to the ride in. The author's favorite method is to give them 100 mg of gabapentin. This can be given about 90 minutes prior to the ride either by mouth, or by withholding food and then mixing it with a tablespoon of their favorite wet food. Most cats will respond to this method of sedation and be much more comfortable for both the car ride and the initial examination at the clinic. Just warn the owners that the cat may be a bit woozy. Feliway wipes can also be dispensed to help with reducing stress in cats. You can offer cat owners this pheromone at the time they come in to pick up their gabapentin. Dogs are less likely to have the same degree of stress for car rides and veterinary visits, but for those dogs that do trazodone can be administered at a dose of 2-3 mg/kg or gabapentin at 5-10 mg/kg. As with cats, warn the owners of sedation. In both dogs and cats, neither of these drugs seems to have a significant effect on the doses of anesthetic medications administered. Nausea is a big problem for many animals. Although *Cerenia* is indicated for the control of vomiting, recent studies show that if it is given both the day before and the day of travel and anesthesia, that it *reduces feelings of nausea* as well.

Michael C. Petty, DVM N Amer Vet Conf, Feb 2018

FIC, think outside the box

If you're still treating the bladders of feline interstitial cystitis (FIC) cats with antibiotics and anti-inflammatories alone, it's time to get with the program. What these cats need more than anything is MEMO (multimodal environmental modification), more water, and dietary changes. Sterile bladder inflammation is the single most common cause of lower urinary tract signs in cats. Tony Buffington, DVM, and Jodi Westropp, DVM the gurus of all things lower urinary tract, have coined the term "Pandora's Syndrome" to describe sensitization and upregulation of the feline stress response that's often most dramatically manifested in the urinary bladder. When a sensitized cat is put in a provocative environment, it ends up with the signs that constitute FIC. FIC presents as waxing and waning lower urinary tract signs that occur alongside sickness behaviors in other systems, most commonly the GI tract. The good news? The stressors that provoke these signs can be ameliorated by environmental modification and enrichment. "Yeah, but I gave the cat antibiotics and the problem went away." FIC is a self-limiting condition. Whether you prescribe antibiotics or the client gives the cat coconut oil, the problem will still go away. (And if the client makes the right manipulations in the environment and the cat likes the coconut oil, it's even more likely to subside.) As we all know, correlation is not causation, but it's tempting to draw conclusions when we give antibiotics, wait a few days and experience cessation of clinical signs. But if we continue to throw antibiotics at FIC without addressing the underlying stressors that are causing sickness, we are harming, not helping. Think about it. These cats are already stressed out, and now we want to stuff tablets or liquid down their throats a couple of times a day?

> Julie Fischer, DVM, DACVIM Vetted, Mar 2018

Minimizing health risks while traveling

Risk-based vaccinations are recommended for dogs in addition to core vaccines; these include "lifestyle" vaccinations against Bordetella bronchiseptica, parainfluenza virus, leptospirosis, Borrelia burgdorferi, and canine influenza. AAHA offers a lifestyle-based vaccine calculator (aaha.org/guidelines/canine vaccination guidelines/vaccine calculator.aspx) that facilitates creation of an individualized risk-based vaccination protocol. Fewer risk- based vaccination options are available for cats, but cats that travel should be evaluated for supplemental vaccinations against feline leukemia virus, Chlamydophila felis, and Bordetella bronchiseptica. Pet owners should also consider seasonal, emerging, and otherwise timely disease risks when preparing for travel. In 2017, the American Heartworm Society released guidelines (heartwormsociety.org/ images/ANews/SKO Transport Guidelines for Web E. pdf) for minimizing heartworm disease transmission during travel. In June 2017, canine H3N2 influenza re-emerged in the United States, primarily throughout the southeast and midwestern states. If exposure is likely, vaccination against both H3N2 and H3N8 strains should be considered at least 4 weeks before travel.

Brian A. Di Gangi, DVM, MS, DABVP NAVC Clin Brf, Jan 2018

Assessing glycemic control in the cat

It appears that methods of assessing long-term glycemic control are better indicators of response to therapy with oral hypoglycemics than are spot glucose determinations or blood glucose curves. In humans, the response to treatment is measured by a decrease in hemoglobin A1C with most oral hypoglycemic agents yielding a modest decrease of about 1%-2%. The author prefers to monitor the resolution of clinical signs of diabetes mellitus, such as polydipsia and polyuria, and serum fructosamine concentrations in cats undergoing oral hypoglycemic therapy. Serum fructosamine concentrations lower than 400-450 micromol/L are consistent with moderate to good long-term control of hyperglycemia. Body weight should increase or remain stable, appetite should remain good and polydipsia/polyuria (as blood glucose drops below the renal threshold for glucose) should resolve with effective oral hypoglycemic therapy.

Deborah S. Greco, DVM, PhD, Diplomate, ACVIM

Mich Vet Conf, 01:17