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Handling the fearful dog

For dogs that are difficult to restrain and potentially aggressive, the primary goals are to ensure safety and to minimize fear and anxiety for the pet. If the dog is trained to wear a head halter or muzzle prior to the visit, often the procedures can be accomplished with a minimum of fear or anxiety for the pet. In fact, not only does a head halter allow for a safe and calm examination, dogs that are food motivated can be distracted with favored treats while gently restraining the head should the dog become increasingly anxious. This technique is displayed on www.abrionline.org. Alternately a muzzle might be used so that all parties can remain calm and safe. Ideally the dog should be pretrained to accept a basket style muzzle before coming into the hospital but this might be accomplished on site, by generously applying peanut butter, squeeze cheese or even canned cat food on the inside of the basket muzzle. Basket muzzles provide many advantages over traditional nylon, mesh muzzles−−they allow panting and normal respiration; the dog may be fed soft, small treats, and normal canine communication signals such as lip curling, growling or snapping can be monitored. Another product that covers the eyes to reduce the visual stimuli that might aggravate the dog's fear is a Calming Cap (www.entirelypets.com).

Theresa DePorter, DVM
MI Vet Conf Procd, 01:11

Food allergy in the cat

Suspect food allergy in cats with intense head or neck pruritus. The degree of self-mutilation and excoriation that occurs in cats with food allergy can be dramatic. Other differential diagnoses include ear mites, atopy, otitis externa, and scabies. However, cats with these conditions typically do not demonstrate the same degree of self-mutilation. This author recommends a strict novel antigen diet; most patients show dramatic improvement within a few days.

Kenneth R. Harkin, DVM, Dip ACVIM
Vet Med, 102:12

INSIDE THIS ISSUE

E coli UTI

Preventive low-dose antimicrobial treatment (e.g., nitrofurantoin, 4 mg/kg, PO, once at bedtime instead of q8h) may be indicated for recurrent *E coli* UTI with an identifiable underlying cause. Low-dose treatment should be initiated after the current infection is properly controlled (following 4-6 weeks of antimicrobial treatment at the therapeutic dose and a negative urine culture). Uropathogenic *E coil* is considered to be zoonotic based on studies documenting sharing of the organism within a household. Prevalence studies have shown that between 8% and 17% of dog-owner pairs share fecal *E coli* with urovirulence traits. The route and direction of transmission between species are not fully understood. Prompt identification and appropriate treatment of *E coli* UTI, as well as maintenance of good hygiene, may reduce risk for transmission of uropathogenic *E coli* between pets and owners.

Kate S. KuKanich, DVM, PhD, Dip ACVIM
NAVC Clin Brf, Aug 2011

Lyme nephritis

Recommendations for screening and treatment of dogs with suspected Lyme nephritis. These are based on limited experience, theory and not yet on strong clinical data! 1. Monitor dogs in endemic areas for Lyme infection. 2. Screen all positive dogs for signs of proteinuria or microalbuminuria. 3. Screen all dogs that present with proteinuria or microalbuminuria for Lyme. 4. Consider treating any dogs positive for both Lyme and proteinuria or microalbuminuria with 4–6 weeks of doxycycline (10 mg/kg/day, PO). 5. If proteinuria persists or worsens (based on urine protein/creatinine ratio): a. Continue doxycycline; b. Consider low protein diet and an ACE inhibitor; c. Consider renal biopsy. 6. If the renal biopsy is consistent with immune mediated GN consider immunosuppression with drugs like mycophenolate, azathioprine, chlorambucil, or cyclosporine.

Richard Goldstein, DVM, Dip ACVIM
West Vet Conf Procd, Feb 2010

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Hospice care

Some veterinarians may opt to follow an "either/or" model for patients with life-limiting disease by forcing the client to choose either the most complete care option or euthanasia. Because some owners may find euthanasia objectionable, they are forced to select what could be more costly complete care. For example, if the either/or options for a pet with hemangiosarcoma of the spleen are surgery or euthanasia and the owner does not consider euthanasia a viable option, the only choice is complete care. On the other hand, compassionate palliative/hospice care options might include a belly bandage, corticosteroids, pain management, and follow-up therapy at day clinics. By withholding palliative/hospice care options, veterinarians may be using the "strongest form of coercion" on clients. Veterinarians unable to offer hospice services should be prepared to refer clients to a veterinarian who does offer hospice.

Alice E. Villalobos, DVM
NAVC Clin Brf, Dec 2011

Anesthesia for the aggressive cat

The author tries to use the lowest doses in combinations of drugs to create a calm animal that has become amenable to be manipulated. That combination of drugs might include a tranquilizer and analgesic drug, or sometimes we need heavier sedatives. Combinations might include midazolam, oxymorphone and the addition of dexmedetomidine at a very low dose. That combination will usually achieve nice sedation with minimal cardiovascular and respiratory compromise. The author usually recommends a dexmedetomidine dose of 1-3 µg/kg. And the dosing of midazolam and oxymorphone would be more the mid-range doses. The author's favorite protocol is midazolam at 0.2 or 0.3 mg/ kg, oxymorphone at 0.05 mg/kg, and dexmedetomidine at 0.001-0.003 mg/kg. The dexmedetomidine is such a small volume that it needs to be drawn up in an insulin syringe while the other two drugs (midazolam and oxymorphone) can be drawn up in a regular 1-ml syringe. Those are all combined in one syringe and administered intramuscularly. We sometimes only get one chance at an intramuscular injection. The author takes the one chance and give all three at the same time. Fractious animals are actually hard to sedate with single drug protocols; they respond so much more reliably to drug combinations like this.

Victoria Lukasik, DVM, Dip ACVA
DVM News Mag, Nov 2011

Assessing canine cognitive dysfunction

Canine cognitive dysfunction (CCD), an age-related neurobehavioral syndrome, is underdiagnosed in dogs. This study used data from a large cross-section of older dogs (mean age 11 years, 9 months) to develop a clinical scale for assessing CCD. Recent research identified 27 behaviors that differentiated dogs with dementia from dogs with normal aging. The authors further distilled these into a CCD rating scale (CCDR) composed of 13 behaviors. The CCDR was found to have an overall 98.9% diagnostic accuracy with a 77.8% positive predictive value and 99.3% negative predictive value. A valid method for assessing canine cognitive decline will help veterinarians better determine when to initiate treatment. The CCDR can be found on their website (maturedogs.com). Since early diagnosis is paramount to successful management, tools like this can be greatly helpful in elevating owner and veterinarian awareness of aging changes in dogs.

Patricia Thomblison, DVM, MS
NAVC Clin Brf, Sep 2011

Seizures, adding a second drug

In the cat, diazepam may be added successfully to phenobarbital to control seizures. In the dog, a combination of phenobarbital and KBr (starting dose 20-30 mg/kg, daily) is effective in controlling the majority of patients refractory to monotherapy with either drug alone. However, side effects are common with this protocol, and may be unacceptable to the owner. These include sedation, pelvic limb weakness and ataxia, polyphagia, polyuria and polydipsia. It should be noted that side effects may subside in approximately 1-2 weeks after initiating the new drug, and so patience can pay off. Generally, a balance must be achieved between an acceptable seizure frequency and these side effects, although this may be impossible in some dogs. Generally, the best success is achieved by aiming for a serum bromide level between 2000-5000 mg/l and maintaining a lower phenobarbital level (e.g. 10-20 µg/ml. If seizure control cannot be obtained with this combination of drugs, then other options exist. Many refractory dogs experience cluster seizures at varying time intervals, with relatively good control between cluster episodes. In this case, administration of rectal or nasal diazepam (0.5-2.0 mg/kg) may help to control the cluster events and avoid an emergency visit to the hospital.

Christopher L. Mariana, DVM, PhD, Dip ACVIM
12th NC VMA Conf Procd

UPC, free catch or cystocentesis

Many reports suggest that UPC ratios are reliable only if the urine samples are obtained via cystocentesis. Cystocentesis has its disadvantages, such as risk for bladder tearing or rupture, the need for manual restraint, and difficulty localizing the bladder in some dogs. This study compared UPC ratios obtained via cystocentesis and via free catch in the same dog. Overall, UPC ratios correlated highly regardless of sampling technique. More important, none of the cystocentesis-collected samples with UPC ratios indicating proteinuria had a paired free-catch sample with UPC ratios indicating no proteinuria. Diagnostic information obtained by urinalysis on voided samples was equal to that obtained on samples collected by cystocentesis. The authors concluded that a UPC ratio can be reliably measured from urine with an inactive sediment, regardless of sample collection technique. This report

suggests that an owner can simply drop off a free-catch sample for urinalysis and a UPC ratio. If the sediment appears inactive, a UPC ratio can be added on with reliable accuracy. This will make monitoring proteinuric dogs simpler for owners and for veterinarians.

L. Beatrice et al.
NAVC Clin Brf, 8:9

Effect of lavender on travel excitement

Traditional treatments of travel-induced excitement can be time-consuming and expensive and have adverse effects. It is known that odors can promote psychologic well-being in humans; this study of 32 dogs measured the effect of diffused lavender inside automobiles. Two conditions were tested: one with no odor other than that of the natural environment, and one (experimental) with the ambient odor of lavender supplied via two flannel cloths sprayed with lavender oil and placed in owners' cars 30 minutes before testing. Olfactory stimulation by lavender significantly increased sitting and resting times and reduced moving and vocalizing; no effects on standing were noted. The findings suggest that the odor of lavender may be useful in treating travel-induced excitement in dogs.

D.L. Wells
Comp, 30:5

Behavior, positive punishment

If a dog is in danger of euthanasia because it bites people, we must use positive reinforcement to correct the problem. After positive reinforcement fails, a process that is not actually designed to stop behaviors, we are to hesitantly use the tool that is most likely to stop the behavior. This makes punishment a linear extension of failed positive reinforcement procedures. That is the first speck of logic in this "positive first" argument. Apparently, punishment is more powerful and can do things that positive reinforcement cannot. If that is true, it leads to a host of questions. If punishment has properties that differ from positive reinforcement, why would either be universally recommended or shunned? Who decided on the specific sequence of reinforcement before punishment? Who decided that only one effect should be used? What happens when you reverse the sequence and use punishment to inhibit the behavior followed by positive reinforcement for acceptable behavior? Why wouldn't we attempt to match the correct protocol to the specific behavioral problem? Why don't they know which behaviors are most likely to benefit from reinforcement and which are most likely to benefit from punishment? No answer. While millions of carcasses are hauled to land-fills, major institutions decry the behavioral effect that would save their lives — positive punishment. If you happen to decide that punishment is a valid tool for behavior modification you are faced with the complete absence of academic instruction regarding this tool. In the mean time, the killing goes on and leaves you with the knowledge that an ideology of "nice" stands firmly in the way of resolving the problem.

Gary Wilkes, DVM
CVC, San Diego, Nov 2010

Suturing eyelid margin

When suturing after a wedge resection from an eyelid margin, it can be challenging to keep the suture ends from irritating the eye. This clinician avoids this by placing a simple interrupted suture first and leaving the ends long. When tying the second suture, incorporate the ends of the first suture into the knot of the second. That keeps the suture ends directed away from the eye. The second suture end can be held by the third suture if necessary.

Dr. Rodney L. Hess
Vet Med, 105:10

Social interactions of puppies

Puppies become adept at interacting with other dogs between the ages 4 and 8 or more weeks and with people between the ages of 5 and 10 or more weeks. They're especially able to learn to explore complex new surroundings between 5 and 16 weeks, and if they're not exposed to such stimuli by about 10 weeks, they can become *neophobic* (fearful of the unfamiliar). Because of these sensitive periods—periods in which puppies learn quickly about new social and physical experiences—the recommended time for bringing a new puppy home starts at about 8.5 weeks. Before this, dogs are really honing their dog-dog skills and need the stimulation and solace of their parents and littermates. Dogs with a good social background have more tools for understanding increasingly complex worlds. If a breeder is willing to expose a dog to new environments and housetrain the puppy, it can stay with the breeders through 12 weeks of age without detrimental effects. The real advantages of having the dog stay with the breeder has to do with social experiences with other dogs.

Karen L. Overall, MA, VMD, Dip ACVB
DVM News Mag, 42:8

New antivenom

F(ab)2 antivenom is manufactured in Mexico. It is reported to neutralize the venoms from all common North American pit vipers including Mohave Toxin A. The antivenom is lyophilized, stable at room temperature and easily reconstituted in minutes. Also, field safety studies reveal minimal side effects. Until approved, USDA Permits are required to obtain this antivenom. USDA Permit applications are available using APHIS Form 205. t.i.SAULD S.A. de C.V. is the authorized source in Mexico to obtain this antivenom; www.vetantivenom.com. Parties interested in obtaining free consultation on obtaining permits can contact www. BioVeteria.com; (928) 776-1813.

K. Seibold, et al.
So Cal VMA Pulse, Dec 2011

Sedating the hyperthyroid cat

Thyrotoxic cats are poor anesthetic candidates because they tend to be elderly, cachectic and fragile with multiple organ system dysfunctions. The most important pre-anesthetic preparation for these cats is to render them euthyroid with administration of anti-thyroid drugs. Mild sedation and analgesia can be accomplished with μ-agonist opioids such as oxymorphone (0.05-0.1 mg/kg) or a μ-antagonist-κ–agonist such as butorphanol (0.2-0.4 mg/kg). Acepromazine (0.03-0.05 mg/kg) may be combined to oxymorphone or butorphanol to improve sedation with the advantage of decreasing the incidence of epinephrine-induced arrhythmias. The use of acepromazine may be precluded in hemodynamically unstable cats because its vasodilatory effects may predispose to hypotension. Midazolam (0.1-0.3 mg/kg) combined with oxymorphone or butorphanol may be useful in geriatric cats. Avoid: Alpha-two agonists such as xylazine or dexmedetomidine because they sensitize the myocardium to the arrhythmogenic effects of endogenous catecholamines; and dissociative anesthetics such as ketamine and Telazol because they cause sympathetic stimulation.

Alonso Guedes, DVM, MS, PhD, Dip ACVA
Tex A&M CVM Fel Med Conf Procd, 04:10

Amitriptyline for IFLUTD

Amitriptyline, a tricyclic antidepressant, has been recommended for its analgesic properties, its potential to stabilize mast cells, and its ability to decrease inflammation in cats with highly recurrent or persistent clinical signs of lower urinary tract disease without an identifiable cause. The drug is given q24hr, at night, at a dosage of 2.5-12.5 mg, PO to produce a calming effect in the cat. To date, there have been no placebo controlled clinical studies to document the efficacy of amitriptyline in cats with IFLUTD.

Joe Bartges, DVM, PhD, Dip ACVIM
Wa St VMA Conf Procd, 10:10

Taurine for cardiomyopathy

Recommendations for taurine supplementation in dilated cardiomyopathy are as follows: All American Cocker Spaniels. 1) Consider in animals with dilated cardiomyopathy and cysteine or urate urolithiasis (e.g., English Bulldogs and Dalmatians). 2) Consider in Golden Retrievers, Newfoundland Dogs, Portuguese Water Dogs and any atypical breeds for dilated cardiomyopathy. The suggested taurine dose for dogs with dilated cardiomyopathy is 1/2-1 g, PO, q8-12h for dogs weighing under 25 kg and 1-2 g, PO, q8-12h for dogs weighing >25 kg.

Francis W.K. Smith Jr., DVM, Dip ACVIM
West Vet Conf Procd, 02:11

Consensus panel on leptospirosis

All blood, tissues, and urine from infected dogs should be handled as medical waste and disposed of according to local regulations. All personnel in contact with infected dogs should be informed of the risks so that proper precautions may be taken. Once these patients are home, owners should still avoid contact with their dogs' urine until antimicrobial therapy is completed and should wash their hands after touching the dogs. Vaccination of other dogs in the household at risk of exposure may help decrease zoonotic potential. The consensus panel recommends that other dogs in the household be treated with a 2-week course of doxycycline if there is a common source of exposure. Monitoring of acute and convalescent titers in these dogs is also recommended. There has been no evidence of leptospirosis in dogs that have received the four-serovar vaccines; however, data are insufficient regarding the prevalence of leptospirosis in this population of dogs. The consensus panel recommends that dogs considered to be at risk for leptospirosis infection be vaccinated annually with the four-serovar vaccine.

Vet Med, 106:4

Diabetic remission

There has been discussion regarding the use of porcine, bovine, and human insulins and the importance of their differing amino acid sequences as compared with natural cat insulin. Dog and porcine insulin are similar while cat and bovine insulin are similar. However, amino acid differences are not critical in determining the insulin type used. Rather, it is dose, frequency of administration, diet, and many other factors that determine success or failure in therapy or in the achievement of remission. Also, any cat may respond better to one insulin than to another, therefore, having several choices is always an advantage. Remission may last for years, but diabetic cats that no longer require exogenous insulin are not generally considered "cured." Many cats that go into remission are likely to have ongoing subclinical pathology and the potential for recurrence. The exception would be cats that are misdiagnosed with DM when they actually have temporary stress-induced hyperglycemia. Feline DM is a disease that requires lifelong care and monitoring, even during phases of remission. The onset of clinical disease in cats can be associated with events that increase insulin resistance, most notably indoor confinement and physical inactivity; obesity; and feeding a high-carbohydrate, low-protein diet. The second tier of contributors to chronic insulin resistance includes chronic infection (especially periodontal disease and urinary tract infection) and chronic inflammatory conditions (especially periodontal disease and pancreatitis).

Edward C. Feldman, DVN. Dip ACVIM
Mich St Vet Conf Procd, 01:11

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