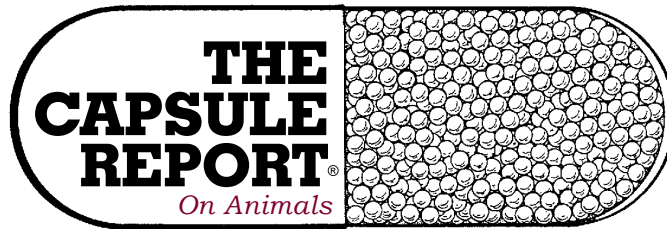


A digest of practical and clinically relevant information from this month's journals and proceedings



Small Animal/Exotic Edition

Our 29th Year

Volume 29, Number 11

February 2011

Botox for osteoarthritis

The botulinum neurotoxin type A (BoNT/A, or Botox [allergan.com]) may possess clinical utility for osteoarthritis-associated pain due to its analgesic effects and blockade of sensitization. In this study, intraarticular BoNT/A injections were performed in 5 client-owned dogs with chronic osteoarthritis as a potentially efficacious and safe adjunct treatment. Improvements were noted in both peak vertical and vertical impulse forces after the injections in treated limbs; there were no associated changes in untreated limbs. Post-injection improvement was noted by 4 of 5 owners. These data suggest the potential for BoNT/A injections as a safe and effective adjunct osteoarthritis treatment in dogs.

*H.S. Hadley et al.
Vet Comp Orthopaed, 23:254, 2010*

Studies involving pheromones for undesirable behavior

Studies provided insufficient evidence of the effectiveness of feline facial pheromone for management of idiopathic cystitis or calming cats during catheterization and lack of support for reducing stress in hospitalized cats. Only 1 study yielded sufficient evidence that dog-appeasing pheromone reduces fear or anxiety in dogs during training. Six studies yielded insufficient evidence of the effectiveness of dog-appeasing pheromone for treatment of noise phobia (2 reports), travel-related problems, fear or anxiety in the veterinary clinic, and stress- and fear-related behavior in shelter dogs as well as vocalizing and house soiling in recently adopted puppies. It was concluded that 11 of the 14 reports reviewed provided insufficient evidence and 1 provided lack of support for effectiveness of pheromones for the treatment of undesirable behavior in cats and dogs.

*Diane Frank, DVM, Dip ACVB et al.
JAVMA, 236:12*

High blood pressure and howling in the cat

Cats really need to visit the clinic twice a year, not once a year, for the veterinarian to ask owners the questions that can detect hidden conditions. But because cats hide medical conditions, owners don't recognize the need to see their veterinarian that often. Listen carefully to everything

the owner says because cats hide their signs so well, the owner may not even realize there is a problem. Take time with the owner and take time with the cat — don't rush through the examination. During wellness examinations, cat owners may pass along information that seems frivolous, such as how cute their 10-year-old cat is to watch now

that he has started howling each night in the dining room. "Howling" is a medical sign that the cat may have high blood pressure. It is inappropriate vocalization in a senior cat, and howling at night in particular is commonly associated with high blood pressure.

*Susan Little, DVM, Dip ABVP
Vet For, 24:7*

Electroacupuncture for intervertebral disk disease

This study evaluated dogs with IVDD who underwent decompressive surgery (DSX) vs. electroacupuncture (EAP). The proportion of dogs with clinical success was significantly higher for dogs that underwent EAP (15/19) than for dogs that underwent DSX (4/10); the proportion of dogs with clinical success for dogs that

underwent DSX + EAR was intermediate (8/11). Thus it was concluded that EAP was more effective than DSX for recovery of ambulation and improvement in neurologic deficits in dogs with long-standing severe deficits attributable to thoracolumbar IVDD.

*JAVMA, 236:11
Jean G.F. Joaquim, DVM, PhD, et al.*

Diagnosing hepatic lipidosis

Don't be in a hurry to acquire tissue if hepatic lipidosis (HL) is a primary consideration: Use cytology and clinicopathologic features to make a presumptive diagnosis. During the initial few days of therapy/rescue, these animals have high risk for anesthetic/surgical complications. The author has observed Heinz body hemolysis after etomidate and diazepam sedation (propylene glycol carrier), and after propofol anesthesia (phenol derivative). Usually, the Heinz body crisis hits about 12 hours after drug administration. Aggressive early liver biopsy may lead to death. A presumptive diagnosis of HL is made on the basis of signalment, physical examination, clinicopathologic data, and abdominal ultrasound. This

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The Capsule Report®

justifies hepatic needle aspiration for cytology. However, this procedure is only done after vitamin κ_1 response. Liver biopsy is really not necessary to diagnose HL. Make sure that >80% of hepatocytes are vacuolated on aspiration cytology and that hepatocytes were sampled, not just omental/falciform fat.

*S.A. Center, DVM, Dip ACVIM
18th Fred Scott Fel Symp*

Sedative choices for cardiac patient

Sedative choices this author would specifically recommend against for cardiology patients include acepromazine, atropine or glycopyrrolate, ketamine or tiletamine (in Telazol) for cats with cardiomyopathy, and particularly alpha agonists such as xylazine or medetomidine (in Domitor®). Cardiologists have debated the use of various sedatives in their online specialty forums and the opinions expressed here are not universal. Acepromazine, for example, produces much greater sedative effect than a Valium/butorphanol mixture. Acepromazine can be used at very low doses to help smooth an anesthetic recovery in some cardiac patients. However, the author does not recommend it at typical sedative dosages for dogs with severe heart disease because of potential for hypotension and, in the author's experience, arrhythmogenesis. As a past EKG interpreter this author would say one of the most common anesthetic misadventures veterinarians experience is to give an alpha agonist (xylazine or medetomidine) to any patient other than a young, healthy one.

*Donald J. Brown, DVM, PhD, Dip ACVIM
32nd N New Eng Vet Alpine Symp, 02:10*

Rabies titers for Veterinarians and staff

The Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices recommendations state that rabies pre-exposure vaccines should be offered to individuals with high risk for exposure to rabies, which includes veterinarians and their staff, as well as animal handlers and some researchers and laboratory personnel. Most practicing veterinarians in the US are considered to have a frequent risk for exposure to rabies and should have their titers checked every two years, per the CDC's ACIP recommendations. However, some veterinarians might need their titers checked more or less often, so veterinarians should consult the CDC's ACIP recommendations—Table 6 provides a summarized guide—to determine their relative risk of exposure to rabies. Veterinarians should take the CDC's ACIP resource with them to their physician's office for the titer check. The CDC's ACIP resource indicates that if a rabies titer has fallen below the minimum acceptable antibody level, a single pre-exposure booster dose of vaccine is recommended for persons at frequent risk, which

are most practicing veterinarians, or continuous risk of exposure to rabies. If veterinarians or their physicians have further questions, the CDC can be contacted at (800) 232-4636. Or, they can go to www.cdc.gov/mmwr/preview/mmwrhtml/rr5703a1.htm.

*Dr. Lynne White-Shim
JAVMA, Oct 1, 2010*

Online CE

The University of Illinois School of Veterinary Medicine offers online courses for veterinarians. Geared toward small animal practitioners, the site offers seven areas of study: cytology, diagnostic imaging, parasitology, emerging diseases, dentistry, pain management, and ophthalmology. When you pay for a course, you get 60 days to complete the tutorial. Tests can be taken multiple times. CE credits are provided by the university. The program is AVMA-approved. Additional courses are expected to be added. If you need CE for licensure requirements, remember to check with your state's rules concerning applicability. Go to www.veoillinois.org.

Comp, 29:3

Post-op antibiotics

Perioperative antibiotics should not be continued for more than a few hours after the skin is closed. Routinely dispensing days or weeks of antibiotics after an uncomplicated surgery does not reduce the incidence of infection. The additional antibiotics offer false security and only contribute to the problem of antimicrobial resistance if an infection should develop. The concept is clearly proven and deserves repeating: that prescription of antibiotics sent home with the patient "just in case" does *not* reduce the incidence of infection, but only guarantees that if an infection should develop, it would likely be resistant to your first choice antibiotic.

*Marc Wosar, DVM, MSpVM, Dip ACVS
N Am Vet Conf Procd, Vol 21*

A homemade diet

The following diet was formulated for a pet food crisis during the melamine-cyanuric acid recall. This recipe should be fed for not more than 2 months. Clinicians are advised to set up a consultation with the client at the end of this period to revisit feeding requirements and to consider either re-instituting commercial food products, or a consultation with a clinical nutritionist. Standard Pet Formula - adequate for healthy dogs and cats over 6 months of age: 1 pound fresh boneless skinless chicken breast; 2 and 2/3 cup cooked white rice; 1 Tablespoon safflower oil; 1/4 tsp Morton's lite salt; 1/4 tsp iodinated salt; 3 grams of calcium carbonate without vitamin D (regular Tums-check size); 1 Centrum adult multivitamin-mineral supplement (no special senior, ocular, women's or other versions); 1/4 tsp taurine powder (or 500 mg tablet) (taurine is optional for dogs-essential for cats). Sauté chopped chicken breast in oil until thoroughly cooked. Add rice and salt. Grind Tums, multi vitamin/mineral tab, and taurine supplement together. Add to cooled mixture. Store in refrigerator.

Larger batches may be prepared in advance and stored in the freezer. To feed, calculate caloric needs and divide into twice daily feeding. One recipe batch should provide adequate intake for a 40-45 pound dog for 1 day.

*Joe Bartges, DVM, PhD, Dip ACVIM
WA St VMA Conf Procd*

Ketamine combinations, cat sedation

1) Ketamine (5-15 mg/kg) + midazolam (0.1-0.5 mg/kg); mixed in the same syringe, administered IM or IV (slowly to effect). 2) Ketamine (5-15 mg/kg) + xylazine (0.2-1.0 mg/kg) mixed in the same syringe, given IM (higher doses) or IV (lower doses) to effect. Xylazine may be given 10 min before ketamine. An anticholinergic may be administered to counteract bradycardia effects of xylazine and decrease salivation. 3) Ketamine (2-10 mg/kg) + dexmedetomidine (5-20 µg/kg) mixed in the same syringe, given IM (higher doses) or IV (lower doses) to effect. An anticholinergic may be administered to counteract bradycardia effects of dexmedetomidine and decrease salivation. 4) Ketamine (5-10 mg/kg) + acepromazine (0.03-0.1 mg/kg) + butorphanol (0.2-0.4 mg/kg) or hydromorphone (0.05-0.1 mg/kg) mixed in the same syringe, given slowly IV to effect (lower doses) or IM (higher doses). Fast and smooth induction but recovery may be VERY prolonged!

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

Feline practice gems

Meloxicam (0.1 mg/kg x 2 days, then 0.1 mg (total dose/cat), q24h to q48h) is a useful and safe NSAID for cats. Two drops from the bottle approximates the 0.1 mg dose using the commercial Metacam suspension. Neutropenia + fever + chronic illness—consider Toxoplasma. Do IgM titer for active disease. Some cats are more comfortable if you place them in lateral recumbency to draw blood from the jugular vein. Try Rutin therapy for idiopathic chylothorax: 50 mg/kg, PO, q8h. Available at GNC and other health food stores. If an owner complains that their cat licks bricks, cement, eats kitty litter etc, the cat is probably anemic (don't know why they do it but they do).

*Alice M. Wolf, DVM, Dip ACVIM
TN VMA Conf Procd, 03:07*

Treating feline upper respiratory signs

Maintaining hydration is essential for tissue perfusion, but also to make secretions less viscous and to improve cell function (e.g., their ability to clear mucus via the mucociliary apparatus). Thus, humidifying the air around patients with chronic airway narrowing is beneficial be it by steaming the bathroom or instilling saline into the nostrils to stimulate sneezing and clearance of the nasal passages. Similarly, but by a different mechanism, decongestants can be administered. Oral decongestants include diphenhydramine HCL at 2-4 mg/kg, PO, q8h, or dimenhydrinate at 4 mg/cat, PO, q8h; or pseudoephedrine at 1 mg/kg, PO, q8h. Nasal decongestant drops are chal-

lenging to administer, but can be very helpful: pediatric Otrivin = 0.05% xylometazoline (1 drop into each nostril SID for 3 days only to avoid rebound congestion).

*Margie Scherk, DVM, Dip ABVP
VA VMA Conf Procd, 02:07*

Yeast-bread dough poisoning

The dark, warm environment of a pet's stomach acts as an oven and encourages the dough to continue rising. This can result in a bowel obstruction or a bloated or distended stomach. The stomach may then twist, leading to a gastric dilatation and volvulus. This is a life-threatening situation that requires emergency abdominal surgery and treatment for shock. As the yeast ferments in the stomach, it releases alcohol, which may lead to alcohol poisoning. Signs include unproductive vomiting and retching, lethargy, weakness, tachycardia, collapse, and shock, alcohol smell on the breath, neurological depression, hypothermia, hypotension, seizures, and respiratory failure. Induce vomiting if the dough was recently ingested. To stop the rising of the dough, a cold-water gastric lavage may be performed. Aggressive IV fluids and dextrose, abdominal surgery, warming measures, and in-hospital monitoring may be needed.

*Ahna Brutlag, DVM
DVM360, 05:10*

Interstitial cystitis in the cat

Treatment of a first episode or an infrequent acute flare: Resolution of clinical signs occurs in an estimated 85% of cats within one week, often without treatment, though the recurrence rate for clinical signs is high within the next 6-12 months with (or without) conventional treatment. Clinical signs for longer than 7 days are beyond the point of spontaneous resolution for most cats so specific recommendations are justified at that time. Relief of bladder pain during acute episodes or flares of chronic idiopathic cystitis is recommended. Though not specifically studied, oral buprenorphine at 5-20 µg/kg, BID to QID, for 3 to 5 days has been helpful in providing relief to affected cats in the authors' practice. Whether adequate provision of analgesia during acute episodes impacts development of future episodes currently is not known. The best regimen of analgesia for bladder pain (visceral) has yet to be determined.

*Dennis J. Chew, DVM and CAT Buffington, DVM
71st Co St U Vet Conf Procd*

Jumping up behavior

Dogs are social animals and often jump up on people when they are greeting them. This behavior may have originated from wolves as they will lick each other on the face in greeting. Although often considered "cute" as a

puppy, this behavior can become more annoying as the puppy grows or when the pet has muddy feet. The behavior persists in our pet dogs because people reinforce the behavior by interacting with the dog when it jumps up. The interaction may be something positive such as petting the dog or may be negative such as pushing the dog down and saying “no.” In either case, the dog achieves its goal of getting the person’s attention. To control the behavior, the dog should be given an alternative, acceptable behavior to perform such as sitting during greetings. When the dog sits, reward with praise. It can be helpful to have a leash and head collar on the dog so that you can correct the jumping behavior—a slight pull up on the head collar will actually encourage the dog to sit down. It is important to remove any rewards for the jumping behavior. People should be advised to turn away if the dog jumps up on them. Then the command for the appropriate behavior can be given and the dog greeted.

*Jacqueline C. Neilson, DVM, Dip ACVB
West Vet Conf Procd, 02:10*

Comparing glucometers

The reliability of the handheld glucometers appears to be quite variable, and a veterinary-validated system is probably the best option. In a recent study comparing several different devices, the AlphaTRAK (Abbott) had the lowest percentage of misclassified results at 2.1%, compared with 4.2% to 38.7% for the other systems evaluated. An alternative option is a continuous blood glucose monitor. Several different models are on the market, but the Guardian REAL-Time Continuous Glucose Monitoring System (Medtronic) has been evaluated most frequently in veterinary species. In general, these systems consist of a small probe that sits in the interstitial space for a few days and transmits the blood glucose reading to a small receiver. The receiver has to stay fairly close to the patient but is easily attached to a harness or collar. Daily calibration is necessary, but these systems can be helpful in poorly regulated patients.

*Audrey K. Cook, BVMS&S, MRCVS, Dip ACVIM
Vet Med, 105:4*

FIV and FeLV testing

Negative results for either FeLV or FIV are much more reliable than positive results because of the low prevalence of infection in most cat populations. Positive test results should be confirmed, especially in asymptomatic and low-risk cats. No test is 100% accurate all the time, under all conditions. In cat populations with a low prevalence (e.g., <1%), more than half of the cats that test positive are likely to be uninfected. Kittens may be tested for FeLV and FIV at any age. Most kittens test negative, indicating no infection. Antibody tests for FIV can detect antibodies passed in colostrum from an infected or vaccinated mother, which can be mistaken for infection in the kitten. Kittens that test positive for FIV antibodies should be retested every 60 days up to 6 months of age. If the kitten becomes seronegative, it

most likely is not infected. If results of tests performed after 6 months of age are still confirmed positive, these kittens should be considered infected. FeLV vaccinations will not induce positive test results. FIV vaccinations will induce positive test results.

*Julie Levy, DVM, PhD, Dip ACVIM et al.
Comp, 31:6*

Monitoring diabetic cats

Blood glucose curves remain the best way of evaluating the insulin’s effectiveness, but because of the problem of stress hyperglycemia and the tendency for some cats to lose their “happy demeanor” in the hospital, this method of monitoring cats with diabetes is sometimes not possible or may even be counterproductive. The best parameters for assessing a cat’s control and quality of life are 1) the owner’s subjective evaluation of improvement in signs (polyuria and polydipsia, appetite) and log data, 2) weight changes (e.g., weight loss in an obese cat; weight gain in a thin cat), and 3) general appearance (hair coat; muscle mass and neuromuscular function, including the ability to jump and climb stairs). Measurement of urine glucose and ketones is often possible for many owners at home and can help identify unregulated diabetes (ketonuria or persistently high urine glucose) and cats that have transient diabetes and are becoming normoglycemic (persistently negative urine glucose for more than 48 hours).

*Debra L. Zoran, DVM, PhD, Dip ACVIM
Nestlé Purina Symp, 03:07*

Kitten diarrhea

The prevalence of *Giardia* infection in cats is reported at 1% to 12%, and infection can be diagnosed by zinc sulfate flotation or immunofluorescent techniques, which detect *Giardia* cysts, and enzyme-linked immunosorbent assay (ELISA), which detects *Giardia* antigen. Of note, a recent study in dogs observed that, at a low prevalence rate, zinc sulfate flotation, the SNAP *Giardia* (idexx.com), and ELISA tests all had good negative predictive values but poor positive predictive values, suggesting that these tests are of more use for excluding than positively identifying giardiasis as a cause of clinical signs. Because *Giardia* can be treated inexpensively and adverse effects with fenbendazole (50 mg/kg/day, for 5-7 days) are rare, treating kittens negative for *Giardia* can be justified. Metronidazole (25 mg/kg, q24h, for 5-7 days) is also effective treatment, but because it has been associated with neurotoxicosis, it should be reserved for use in confirmed cases.

*Melanie Craven, BVetMed, DSAM, MRCVS, Dip ECVIM
NAVC Clin Brf, 8:8*