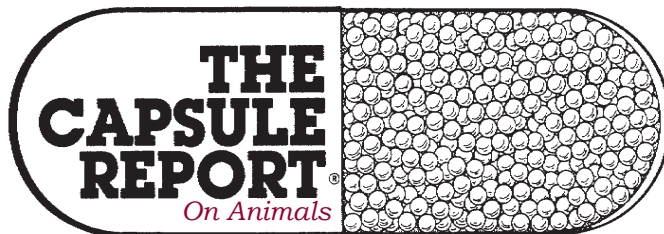


A digest of practical and clinically relevant information from this month's journals and proceedings



Small Animal/Exotic Edition

Our 30th Year

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Guidelines for friendly cat handling

Studies have shown that over 58% of cats "hate to go to the vet." This has resulted in many cats not receiving much-needed veterinary care. The American Association of Feline Practitioners (AAFP) and the International Society of Feline Medicine (ISFM) Feline-Friendly Handling Guidelines provide solutions based on scientific evidence and understanding of the feline species to help improve the veterinary experience for cats and cat owners and, subsequently, increase feline visits. Download a PDF of the guidelines and the client handout at catvets.com/professionals/guidelines/publications.

*Ilona Rodan, DVM, Dip ABVP
Vet Med, Oct 2011*

Reasons for decreased office visits

Logistic binary regression was used to identify variables that were common among practices that had experienced an increase in the number of patient visits during the preceding 2 years. Four attributes most commonly associated with an increase in the number of patient visits during the preceding 2 years were identified: Clients saw the same veterinarian during every visit. The veterinarian believed that wellness examinations were the practice's most valuable service. The veterinarian believed that marketing and advertising were critical to the practice's success. The practice was an active user of social media such as Facebook. Similarly, logistic binary regression identified 2 attributes most commonly associated with a decrease in the number of patient visits during the preceding 2 years: The practice owner believed that advertising undermined his or her credibility as a veterinarian. The practice lacked referral arrangements with other pet service providers such as groomers, dog walkers, and pet stores. From this analysis, the authors deduced that an active marketing program, a strong belief in wellness examinations, and a strong veterinarian-client bond contributed substantially to practice growth even at a time when pet visits to veterinarians overall were declining.

*John O. Volk, BS et al.
JAVMA, Nov 15, 2011*

Using the right cyclosporine

Microemulsion cyclosporine, (Atopica) is an immu-

nomodulator approved for use in dogs for the treatment of atopic dermatitis. This author recommends 5 mg/kg, qd initial dosing. Atopica, is the only approved formulation for use in dogs. It is extremely important when using cyclosporine to use a *true* microemulsion formulation. Most generic formulations, and all compounded formulations are not microemulsion formulations. A non-microemulsion formulation (such as Sandimmune) is not as well absorbed, and therefore much less effective. Microemulsion formulations of cyclosporine (Atopica, Neoral, and Gengraff) are not inexpensive and compounding pharmacies, etc. tout the great value of their cyclosporine formulations in comparison. However, although less expensive, they are not microemulsion formulations and therefore less effective.

*Karin M. Beale, DVM, Dip ACVD
82nd FL VMA Conf Proc*

Aural hematoma, securing the ear

To keep an ear stationary after aural hematoma surgery, this clinician places 2 stay sutures. First, pull a suture completely through the pinna from the inner surface to the outer. Next, take a bite of skin on the head above the ear and come back through the pinna from the outer surface to the inner and tie the suture. Then repeat the process. Thus, 2 simple stay sutures are placed. Leave the tails long to easily identify them when the sutures are removed a week later. This technique places the ear in a position that makes administering medication easier and keeps the ear from being further traumatized when the patient shakes its head. In addition, place an Elizabethan collar to prevent the patient from scratching or pawing and causing further damage.

*Dr. A. Brent Chance
Vet Med, Apr 2011*

Alternative therapies for OA

Duralactin (duralactin.com) contains MicroLactin, a patented special dried milk protein from the milk of hyperimmunized cows. Partially purified preparations inhibit inflammation in many laboratory animal models. The anti-inflammatory activity is bioavailable both orally and

INSIDE THIS ISSUE

- Cat food, carbohydrates; P 4
- Cat handling, guidelines; P 1
 - CPR, correctly; P 2
- Cranial electrotherapy; P 2
- Cyclosporine, using; P 1
- Dehydration, kitten; P 2
- Diabetes, and glucosamine; P 4
 - Diarrhea, kitten; P 3
 - End-of-life care; P 4
 - Hematoma, aural; P 1
- Lipid emulsions, toxicosis; P 2
 - Noise phobia, cat; P 2
- OA, alternative therapies; P 1
 - Office visits, decreased; P 1
- Otitis, Pseudomonas, recipe for; P 4
- Pyoderma, methicillin resistant; P 4
 - Steroids; P 2
 - Sugar bandages; P 2
- Wellness vs. preventive care; P 2

The Capsule Report.

systemically, is effective regardless of the etiology of the inflammation, and appears to function with no evidence of GI irritation. Unlike steroids and NSAIDs, Duralactin has no demonstrable COX-inhibiting activity or short- or long-term toxic effects in any species studied thus far. This is especially important for dogs in which long-term management of musculoskeletal disorders is indicated and the extended use of steroids or NSAIDs is contraindicated. Elk antler velvet has been shown to aid in the performance of human athletes and may help with osteoporosis in women. In a double-blinded, placebo-controlled study, CanEVA-K9 (www.caneva.ca) was effective in alleviating the clinical signs of arthritis in dogs and improved ground reaction forces. In addition, investigators observed that the dogs receiving CanEVA had a significant reduction of muscle atrophy, suggesting a myotrophic effect.

*James S. Gaynor, DVM, MS, Dip ACVA
N Amer Vet Conf Procd, Vol 22*

Wellness or preventive care?

It's a case of semantics, but it could alter the perception pet owners have about the need for annual visits. In fact, Jonathan W. Ayers, chairman and CEO, of IDEXX Laboratories, recently ran a discussion group that focused on the use of terms "wellness" and "preventive care." According to Dr. James F. Wilson, a veterinary consultant and lawyer, "I sat and listened to this discussion and realized what a disastrous use of the word 'wellness' has been for the veterinary profession. We need to simply eradicate that word and replace it with the terms preventive care. Why would anyone want to make a wellness appointment to prove their pet is just fine?" Conversely, the word preventive care implies that veterinarians are going to be doing things like physical exams, diagnostics, possibly vaccinations and parasite control to help their pets stay disease free. "It's a case of semantics and connotation," Wilson says, but it could help clients make the connection that there is a reason to visit veterinarians every year or more frequently.

DVM News Mag, 42:11

Noise phobia in the cat

This is not a common presenting complaint because most cats just hide until the aversive noise abates. They tend not to inflict lots of property damage when nervous, unlike their canine counterpart. However, one should consider noise phobias as an underlying issue for elimination problems. Litterboxes are frequently located in laundry rooms. The buzzer on the machines may startle a cat while it is eliminating, creating a negative association with the box. This could account for the "sudden" onset of a problem in a cat that has reliably used the box for several years. In most cases, one can manage feline noise phobias by protecting the cat from

the noise. Another option is to implement desensitization and counterconditioning to problematic noises. Commercially available recordings (www.soundsscary.com) can aid in this treatment process.

*Jacqueline C. Neilson, DVM, Dip ACVB
OR Vet Conf Procd, 03:07*

Cranial electrotherapy

Desperate caregivers of animals battling psychological and physical discomfort are finding websites that promote electrotherapy for the mind, known as cranial electrotherapy stimulation (CES). Veterinarians need to be able to counsel them on whether and how a simple, noninvasive electrotherapy unit could indeed reduce reliance on pharmaceuticals and restore equanimity in the household. The device that has received the most attention, known as "Alpha-Stim," is now celebrating its 30-year anniversary (www.alpha-stim.com). Its small, handheld microcurrent machines run on 9-volt batteries. While the analgesic benefits of CES may not be robust enough to supply stand-alone analgesia for operative procedures, its inclusion for situations such as preoperative anxiety and pain as well as post-op analgesia should be considered. CES has received FDA marketing clearance for the treatment of anxiety, insomnia and depression by order of prescription.

*Narda Robinson, DO, DVM
Vet Pract News, Nov 2011*

Using sugar bandages

Degloving wounds are common. Proper initial wound management is paramount to successful treatment. Sugar bandaging is one component of initial management that can be used in such cases. Sugar has many attributes that make it an attractive component to wound therapy. When applied directly to a wound, sugar acts as a mechanical debriding agent. It provides a hyperosmolar environment, which draws extravascular fluid into the wound and contributes to its bactericidal properties. It attracts macrophages into the wound, which help to hasten sloughing of necrotic or devitalized tissue. It cleanses the wound, decreases inflammatory edema, decreases odor, and rapidly induces the formation of granulation tissue and reepithelialization. Lavage the wound with copious amounts of a fluid suitable for wound irrigation. Debride devitalized/necrotic tissue. Pour sugar into the wound, completely covering affected area, to a depth of ~1 cm, and bandage the wound with sterile, dry, absorbent material. Follow general bandaging principles and include a second bandage layer to hold the absorbent material in place. Then cover with an adhesive tertiary layer. Initially sugar bandages should be changed once to twice daily or if strike-through occurs. If crystalline sugar is present in the wound at the time of bandage change, the bandage should be changed less frequently. Lavage the wound at each bandage change and pat dry with sterile gauze sponges. Reapply sugar as above. Treat the wound with sugar until healthy granulation tissue is present.

*Eric A. Rowe, DVM and San Degner, DVM, Dip ACVS
NAVC Clin Brf, 5:8*

Diarrhea in the kitten

In contrast to the classic highly digestible diets available for diet disease some kittens with diarrhea will respond to placing them on a highly digestible high protein, low carbohydrate diet (canned growth or diabetic formula foods). In one recent study, both high protein, low carbohydrate diets and moderate carbohydrate diets designed for GI disturbances resulted in improvement of fecal scores. The reason why kittens or cats respond to these diets is not completely known, but may be related to better nutrient availability, reduced carbohydrate intolerance, or other unknown factors. Kittens fed high carbohydrate diets (typical of dry kitten foods) may develop diarrhea due to bacterial flora changes, and if they are fed canned high protein/low carb diets the diarrhea will often resolve. This problem can also occur in adult cats, and is proposed to result in overgrowth or alteration in the bacterial flora that ultimately results in the development of diarrhea. While this hypothesis remains to be proven in cats and kittens, there is increasing anecdotal evidence that in kittens and adult cats with idiopathic diarrhea, feeding a high protein/low carbohydrate diet is beneficial. While not all forms of kitten diarrhea will resolve with dietary therapy alone, it is an important component of therapy that should be carefully considered and implemented, and adjusted to meet the needs of the pet and its situation.

*Debra L. Zoran, DVM, PhD, Dip ACVIM
25th ACVIM For Procd*

Dehydration in the kitten

Dehydration occurs easily in neonatal kittens with diarrhea, vomiting, or reduced fluid intake. Neonates have poor compensatory mechanisms and immature kidney function. Daily urine output in one month old kittens is 25 ml/kg compared to 10-20 ml/kg in the adult cat. Neonates also have higher fluid requirements than adults for reasons such as higher total body water (about 80% of body weight, compared to 60% in adults), greater surface area to body weight ratio, higher metabolic rate and decreased body fat. Hydration status may be difficult to assess in the youngest patients. Skin turgor is not a reliable test of hydration for kittens under 6 weeks of age as their skin has decreased fat and increased water content compared to adults. The kitten's mucous membranes should be moist and either hyperemic or pink. Pale mucous membranes and a decreased capillary refill time indicate at least 10% dehydration. Neonatal urine is normally colorless and clear; in dehydrated kittens, the urine is dark with a specific gravity over 1.020.

*Susan Little, DVM, Dip ABVP
Tex A&M CVM Fel Conf Procd*

CPR, done correctly

Complete chest recoil or decompression, which refers to passive expansion of the chest wall after a chest compression is delivered, is an important component of optimized CPR. Resuscitators often do not

remove their weight from the chest after each compression, a circumstance referred to as leaning. The consequences of leaning include increased intrapleural pressure, reduced venous return, and sub-optimal ventricular filling between compressions, all of which compromise efficacy of CPR. It is therefore important to remove pressure after each compression to allow for proper recoil. Because fatigue may decrease chest compression rate and force and increase leaning, it is recommended that rescuers performing compressions be replaced or switch positions with other team members every 2 minutes.

*Manuel Boller, Dr med vet, MTR, Dip ACVECC et al.
JAVMA, Mar 1, 2012*

Steroids

Oral steroids are well absorbed and as fast in onset of the antiinflammatory effects as injectable glucocorticoids. Giving an injection to "get things started" is not necessary and will lead to steroid overdose if tablets are given for a controlled effect. Prednisone is converted to prednisolone and can be interchanged for most dogs. There are some individual dogs that using prednisolone may be more effective. The dosage for antiinflammatory effects is 0.25 mg/lb, BID or can be given 0.5 mg/lb/day. Once a clinical remission is achieved, the dosage may be tapered to an alternate day therapy. This will allow the pituitary-adrenal axis to rebound. Immune suppressive dosages of these drugs begin at 1 mg/lb/day. Methylprednisolone is also an intermediate acting glucocorticoid that is good for alternate day therapy. It is slightly more potent than prednisone or prednisolone (4 mg methylprednisolone = 5 mg pred.) and is usually associated with less PU/PD in dogs. It is the preferred glucocorticoid for cats (author bias). The dosage for antiinflammatory effects in cats is twice the dosage of dogs. This is due to fewer receptors and less affinity than dogs. In general, a 10 lb cat would receive 4 mg of methylprednisolone twice daily until remission. Cats in general are more tolerant of corticosteroids than dogs and may do well with injectable forms.

*Robert A. Kennis, DVM, Dip ACVD
Cent FL Acad Vet Derm Sem Procd*

Lipid emulsion for ivermectin toxicosis

Ivermectin toxicosis in veterinary patients can result in death without aggressive treatment, and severe toxicosis often requires mechanical ventilation and intensive supportive care. This is particularly true in dogs affected by the ATP-binding cassette polymorphism. Novel intravenous lipid emulsion (ILE) treatment has been shown to be effective in human patients with lipid-soluble drug toxicoses, although the exact mechanism is unknown. In the patient in the present report, ILE was used successfully to treat ivermectin toxicosis.

The lipid product used was Liposyn III 20% (Hospira Inc.). The dosage used was 0.68 ml/lb, IV over 10 minutes, followed by a CRI of 0.11ml/lb/min, IV, for 60 minutes. Until further safety and dosage information is determined, the judicious use of ILE treatment should be limited to severely affected, critically ill patients and not to routine treatment of poisoned patients that are already responding to currently recommended treatments. However, preliminary results on the use of ILE treatment in veterinary medicine as a relatively inexpensive, generally safe antidote for lipid-soluble toxicosis appear promising and warrant further investigation.

*Dana L. Clarke, VMD, Dip ACVECC
JAVMA, Nov 15, 2011*

Determining carbohydrate in cat food

A typical canned food label may have a guaranteed analysis that looks like: Crude Protein—Min. 9.5%; Crude Fat—Min 5.0%; Crude fiber—Max 0.8%; Moisture—Max 75%; Ash (minerals)—Max 2.9%. Notice that there is no listing for carbohydrates, a very important consideration when buying cat food. There is, however, an easy way to find out approximately how much carbohydrate is in the food. Simply add all the numbers up (i.e. 9.5 + 5.0 + 0.8 + 75 + 2.9). The sum is 92.3. Subtract that from 100 and you have the percent carbohydrate (i.e. 7.7% carbohydrate).

*Elizabeth Hodgkins, DVM
Vet Pract News, 19:10*

Methicillin-resistant Staph pyoderma

Methicillin-resistant staphylococcal skin infections are becoming increasingly common in general and specialty practice. Many isolates are now multi-drug resistant such that the only systemic options are human parenteral antibiotics which are prohibitively expensive, require hospitalization and lead to ethical questions concerning the validity of their use in animals. This author has treated many cases for which systemic antibiotics are no longer a viable option. However, the diligent owners and their veterinarians are controlling recurrence by keeping the hair coat short and using daily or every other day 3%-4% chlorhexidine shampoos with a spray on the affected areas on the non-shampoo days. Long-term maintenance has usually been twice weekly shampoos with twice weekly sprays or wipes (depending on the location of lesions) between the shampoos. Topical mupirocin ointment is also helpful for focal lesions and newly erupting lesions applied twice a day. Studies have shown that cutaneous bacterial pathogens may be harbored on mucosal surfaces (upper respiratory, lips, anus) and some have used mupirocin on these surfaces to help prevent recurrence of pyoderma.

*Kenneth W. Kwochka, DVM, Dip ACVD
SCVMA Derm Sem, Nov 2011*

Topical recipe for Pseudomonas otitis

The compounding of Timentin (ticarcillin clavulanate) is often helpful in the treatment of resistant Pseu-

domonas otitis. A volume of 5 ml of saline or water is added to the 3.1 gram vial of powder making about 6 ml of solution. Then 1.0 ml aliquots are removed with one syringe used to place the 1.0 ml of solution in a dropper bottle with 20 ml of saline. The solution is dispensed for administration twice daily and maintains stability for 1 week in the refrigerator. The remaining 5 syringes are placed in the freezer where they are stable for up to 3 months. Each week, another is thawed to be diluted with 20 ml of saline to be placed in the dropper bottle following discarding the existing solution and cleaning the container. This provides 6 weeks of therapy. Be sure to leave some space in the syringes before freezing for expansion. Treatment of any Gram negative infection of the ear should be based on bacterial culture and susceptibility.

*J.M. MacDonald, MEd, DVM, Dip ACVD
17th San Diego Co Fall Conf Procd*

End-of-life care, cat: nutrition

Nutrition is essential, providing calories from fat and protein, antioxidants, and other micronutrients. Carbohydrates are less essential for cats as obligate carnivores; however, they can be a good source of energy. The goal is to have a cat eat 50 kcal/kg ideal weight/day on its own. Often illness interferes with meeting this goal, so we have to assist. Pharmacological agents such as cyproheptadine (Periactin) at 1 mg/cat, PO, q12h or mirtazapine (Remeron) at 3 mg/cat, PO, q72h can be used. Discontinue cyproheptadine if ineffective after 4 doses. Mirtazapine has the added benefit of being an antiemetic as well as an appetite stimulant. While diazepam is still an option, because it is sedating, has the possibility of inducing irreversible, life-threatening toxic hepatopathy, and because it has the least likelihood of being effective, it cannot be recommended.

*Margie Scherk, DVM, Dip ABVP
78th AAHA Conf Procd, 2011*

Diabetes and glucosamine

Despite lack of evidence of adverse events on diabetic regulation, some veterinarians express concerns about the potential impact of glucosamine and chondroitin sulfate (Glu/CS) on patients with diabetes and the interpretation of fructosamine levels. This feline study confirmed results found in an earlier canine study in which glucosamine was found to have no effect on blood glucose. While a study is needed to demonstrate the benefits of Glu/CS supplementation in cats, any perceived detriment to glucose regulation should be eased.

*Jonathan Miller, DVM, Dip ACVS et al.
NAVC Clin Brf, Nov 2011*