

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



Small Animal/Exotic Edition

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Reasons for decreased office visits

Some pet owners think that routine checkups are unnecessary for dogs and cats. The cost of veterinary care can be much higher than many pet owners expect. Plus, cats are plain difficult to take to the clinic. These are the three primary client-related factors associated with a recent decline in the frequency of veterinary visits for dogs and cats, according to findings from the new Bayer Veterinary Care Usage Study. The study also identified three primary environmental factors associated with the decline—the recession, fragmentation of veterinary services, and use of the Internet as a source of information about animal health. The study found that 24% of pet owners completely agreed or somewhat agreed with the statement that routine checkups are unnecessary, while another 23% neither agreed nor disagreed. Regarding the price of veterinary care, 53% of pet owners think costs are usually much higher than they expected. Thirty percent would try another clinic that had a coupon or special, 26% would switch veterinarians if they found one who was less expensive, and 26% are always looking for less expensive options for veterinary services and products. Fragmentation of veterinary services is high on veterinarians' minds, according to the study. Pet owners now have the option of visiting clinics at pet stores, specialty practices, mobile clinics, and animal shelters as well as traditional clinics. Fifteen percent of pet owners in the survey said that with the Internet, they don't rely on the veterinarian as much. Thirty-nine percent look online first if a pet is sick or injured.

JAVMA, 238:5

Why fat dogs eat less

Body composition of 1%-2% fat at birth increases rapidly to 10%-15% by weaning at 4-6 weeks, and is 15%-20% in normal dogs during the first year of maturity. Females have increased levels when compared with males. Twenty-five to 30% fat is normal in dogs 8-10 years of age as there is lower lean body mass and increased adiposity with ageing. The initial phase of obesity occurs during chronic, positive energy balance.

A phase of static obesity follows when caloric expenditure equilibrates with intake and the animal maintains a stable, but altered body composition of increased adipose tissue. These phases may repeat many times during an animal's life leading to a gradual step-wise increase in body weight and body composition. Because fat-free mass appears to be an important determinant of resting energy, as more fat mass is acquired and as lean mass is lost, less energy intake is required to maintain the increased body weight (increasing fat mass). This explains why many obese animals do not appear to be eating "too much" or why owners often say "but my dog only eats a half of a cup of food a day."

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

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A Smart Phone behavior App for clients

An iPhone application called Dog Trainer Pro is now available for downloading. The author is a psychological consultant and canine behavior specialist. The free App features training and behavior tips for puppies and adult dogs in text format as well as links to the author's online resources. The App is designed to help veterinary professionals offer reliable science-based advise to their clients.

*Dr. Jez Rose
Vet Pract News, July 2011*

Hazards of bloodroot

Several Internet sites promote the use of bloodroot and other escharotics as topical, parenteral, and oral preparations for the treatment of cutaneous neoplasia. The manufacturers of these products do not advocate surgical removal and histologic examination following escharotic treatment. The author of one such Internet site, for example, claims that "biopsy is an unnecessary procedure...because little useful information is resultant from biopsy. In most cases, these Internet sites advocate the use of bloodroot, often in the form of a topical salve, as a primary treatment for cutaneous tumors. Information regarding tumor response to es-

The Capsule Report.

charotic treatment is usually limited to testimonials that are uniformly positive in nature. These authors believe that bloodroot and other escharotics constitute potentially harmful herbal products, and that their use in the treatment of cutaneous neoplasia in domestic animals should be discouraged. Veterinarians should be willing to engage pet owners in open dialogue about the use of herbal products. A dismissive or condemnatory approach should be avoided as it may be offensive or embarrassing to pet owners and discourage further communication.

*Michael O. Childress, DVM, MS, Dip ACVIM et al.
JAVMA, Aug 1, 2011*

Lysine for feline herpes

For cats that suffer frequent bouts of recrudescence disease, lysine may help. While lysine alone will not eliminate a herpesvirus infection, lysine can decrease the severity of clinical signs and increase the time between recurrences. Lysine is typically dosed at 250 mg, orally, twice daily for kittens and lifelong at 500 mg orally twice daily for adult cats. Lysine is safe; however, it should be administered with food since it may induce vomiting if given on an empty stomach.

*Wendy M. Townsend, DVM, MS, Dip ACVO
Vet Med, 102:8*

Significant differences of the feline orbit

1) The orbit of the cat has an open orbit allowing the ramous of the mandible to project further into the orbit when the mouth is opened. The feline ramous however comes off at a less acute angle when compared to the dog, allowing even greater opening of the mouth. Clinical Note: Due to the difference between cats and dogs it becomes more difficult to diagnose a retrobulbar abscess in cats. 2) Cats have shorter optic nerves than dogs. Clinical Note: Greater care needs to be exercised when enucleating a cat's eye when compared to the dog. Inadvertent stretching or twisting of the feline optic nerve can result in vision loss of the contralateral eye. 3) The orbital cone consists of connective tissue, blood vessels, fat, extraocular muscles, nerves, and smooth muscle. Clinical Note: Blood supply to the anterior uvea reaches that area via the rectus muscles and oblique muscles. During a proptosis damage to more than two consecutive extraocular muscles may cause intraocular avascular necrosis.

*William W. Miller, DVM, MS, Dip ACVO
104th AR VMA Conf Procd, 2011*

Herbal products to avoid in renal disease

So-called "complementary medications" (sometimes called herbal medicines) are becoming increasingly popular. The potential for interactions with prescribed medications

or simple adverse consequences in patients with reduced kidney function should be considered for patients receiving these medications. Herbal products which should be avoided in patients with renal dysfunction include aristolochic acid, barberry, buchu, Chinese herbal drags, juniper, licorice, and noni juice.

*David J. Polzin, DVM, PhD, Dip ACVIM
116th SD VMA Conf Procd*

Improper use of rabies vaccine

A certain vaccine protocol has drawn the attention of the federal government and veterinary associations recently. The Iowa VMA, acting on a member's concern, posted a precaution in a Communique regarding the off-label use of rabies vaccine as a diluent to reconstitute either canine or feline distemper combination vaccines. The state association warned that this is not an approved use of the rabies vaccine unless it is specifically directed by the manufacturer, and that practitioners should seek advice from the technical services department of their vaccine manufacturer before using rabies vaccine as a diluent for any other vaccine. Although canine and feline vaccines were specifically cited in the IVMA post, the Center for Veterinary Biologics (CVB) says it is concerned with any off-label use of vaccines, but specifically rabies vaccines, as diluents to reconstitute desiccated live-virus vaccines. The center's statement said rabies vaccines used as a diluent can substantially reduce the efficacy of the live viruses contained in veterinary distemper vaccines. Using rabies vaccines as an unapproved diluent also raises concerns about the risk to public health, according to the CVB statement. That's because the efficacy of rabies vaccines when used as an unapproved diluent has not been evaluated. In addition, the expected prevalence of adverse vaccine reactions associated with the practice of off-label use of rabies vaccine to reconstitute distemper vaccines is unknown—for both live-virus and killed-virus vaccines.

Am J Vet Res, Jul 2011

Ear mite infestation in people

Although rare, *Otodectes cynotis* infestation is considered a zoonotic disease. Lesions in people have been reported and consist of a papular eruption on the hands and arms. In one anecdotal report, a veterinarian placed mite-infested ear mite debris in his own ear on several occasions. He successfully infested himself with ear mites and reported intense itching. What was most interesting was his observation that the mites were most active at night and could be heard chewing and moving around his ear. This suggests that ear mite preparations would be best applied in the evening. On a more practical level, this also suggests that veterinarians and owners who clean the ears of pets with ear mite infestations should practice excellent hand-washing hygiene after treatment.

*Karen A. Moriello, DVM, Dip ACVD
Comp, 29:3*

Steps to avoid stress in the cat

Provide a place to hide. Place a towel over the front of the kennel or put a brown paper grocery bag inside the kennel to give stressed cats a place to hide. Place a cardboard box in the cage. A cut box allows the cat to hide inside or jump on top since a cat's instinct when stressed is to climb. Even this slight elevation also helps the cat rest away from any litter odor or mess. Reduce exposure to urine and feces. Consider using litter on disposable cardboard trays that don't have any residual urine scent of other cats. Use one per elimination to keep the cage clean. Clean the food and water bowls. Wash daily instead of just adding to the existing bowls. Feed free choice. Unless contraindicated, provide dry food ad lib, and canned food twice daily. Give a comfy bed. Provide a resting area with sides in addition to a litter box. If the cat rejects the cat bed and curls up in the litter box, provide a second clean litter box. Feliway olfaction ambience (OTC feline facial pheromone)—mist a towel, wait 5 min for the alcohol solvent to evaporate, then place the towel as bedding inside the cage. Alternatively spray the top corner of an empty cage, and add the cat after the spray is dry. Repeat the spray daily as needed. Avoid murmuring any "S" type words that might sound like hissing.

*Rolan Tripp, DVM
So Cal VMA Pulse*

Benzodiazepines for behavior problems

Benzodiazepines are potentially useful for any behavioral problems that manifest with anxiety, fear, or phobia (especially if rapid action and as-needed dosing are desirable) associated with such events as owner departures, storms, or visits to the groomer. Potential side effects include sedation, ataxia, hyperphagia, and weight gain. Tolerance can also be seen with these drugs—the more the pet takes, the more the pet may need to attain the same effects. Another thing to watch for is "paradoxical excitement," a situation where the pet gets more agitated after taking the drug instead of becoming more relaxed. Therefore, owners should give the first dose when they are present so they can observe the effects. The dosage listed for alprazolam in dogs is 0.02-0.1 mg/kg, q4h; for cats, 0.0125-0.25 mg/kg, q8h. For clonazepam in the dog, administer 0.1-0.5 mg/kg, q8-12h; for the cat, 0.015-0.2 mg/kg, q8h. The listed dosage of diazepam in the dog is 0.5-2 mg/kg, q4h; for the cat, give 0.1-1 mg/kg, q4h.

*Terry Curtis, DVM, MS, dip ACVB
NAVC Clin Brf, 8:8*

Website for exocrine pancreatic insufficiency

A group of informed owners of dogs affected with exocrine pancreatic insufficiency has established an online resource (www.epi4dogs.com) to disseminate information about canine exocrine pancreatic insufficiency internationally. The organizers make great efforts to be as evidence based as possible. The site includes information about diagnosis and treatment. It also alerts owners about the likelihood of concurrent abnormalities,

such as cobalamin deficiency and small intestinal disease, that may require additional veterinary intervention to achieve an optimal clinical response. Visitors to the site also share personal experiences regarding management of their own pets with this disease.

*David A. Williams, MA, VetMB, PhD, Dip ACVIM
JAVMA, 237:10*

Intralesional chemotherapy

The intralesional delivery of chemotherapy is attractive in the sense that one can instill a high concentration of drug into a small confined area. Intralesional delivery thereby maximizes tumor cell exposure to cytotoxic drugs and, it is hoped, enhances anticancer effects. Although intralesional therapy does provide a pharmacokinetic advantage, it also can result in some undesirable effects including 1) drug exposure to the environment and to people as the compound oozes out of the injection site and 2) potential local tissue necrosis secondary to nonspecific direct cytotoxic effects to normal local tissues. In light of these drawbacks, intralesional chemotherapy is not particularly attractive for most veterinarians. However, some specific instances do exist in which intralesional therapy is effective. One such example would be the injection of corticosteroids (triamcinolone) directly into a cutaneous mast cell tumor. This form of intralesional therapy is well-tolerated and effective in reducing mast cell tumor size, and accidental human exposure to the steroids used would not be a serious problem.

*Timothy M. Fan, DVM, PhD, Dip ACVIM
Vet Med, Jan 2011*

Tranquilization

1) Acepromazine - reliable tranquilization, not recommended for vicious or potentially dangerous animals, side effects are primarily hypotension but rarely some seizure-prone patients may develop seizures, contraindicated in shock or other hypovolemic conditions and in patients with liver disease; duration of effect 2 - 4 hrs, which is too long for most purposes. Very rarely does the author use the higher doses. It is usually combined with an opioid. Ace at 0.01-0.05 mg/kg, max 3 mg total dose, SQ, IM, IV. 2) Acepromazine & torbugesic (or other opioid) - substantial and reliable effect; not as often recommended for older/compromised patients; fairly prolonged effect, particularly if hepatic function is impaired; may not be the best choice for out-patients since return to "street fitness" often requires 4-6 hrs. Ace at 0.01-0.05 mg/kg, max 1.0 mg, SQ, IM, or IV. Torbugesic at 0.2-0.4 mg/kg, SQ, IM, or IV. Optional anticholinergics, to avoid or treat bradycardia: glycopyrrolate at 0.005-0.015 mg/kg, SQ, or IM; atropine at 0.02-0.05 mg/kg, SQ, or IM

*Ralph Harvey, DVM, MS, Dip ACVA
2011 Music City Vet Conf Procd*

“Sick” behavior in healthy cats

Change of routine can actually trigger behaviors normally observed with sick cats, according to a new study from The Ohio State University CVM. Researchers documented behaviors typically associated with sick animals, such as food refusal, frequent vomiting and litter box avoidance, in response to changes to their normal routine. For veterinary clinicians, when you have a cat that's not eating, is not using the litter box or has stuff coming up out of its mouth, the quality of environment is another cause that needs to be addressed in coming up with a diagnosis. The study recommends that when an otherwise healthy animal presents with these signs, practitioners should consider counseling pet owners on ways to enrich the cat's environment. The study suggests pet owners feed at the same time, keep litter boxes in consistent locations and offer regular playtime.

DVM, 42:2, 2011

Pseudomonas otitis

Systemic therapy is rarely required and is indicated only when the otitis is poorly responsive to topical treatment. Systemic drug therapy should be based on culture and sensitivity, but enrofloxacin (12-15 mg/kg, q24h) or marbofloxacin (5 mg/kg, q24h) can be used pending culture results. An antiinflammatory dose of dexamethasone (0.1 mg/kg) should be given intravenously at the time of the initial ear flush. Systemic glucocorticoids can be used if the otitis is poorly responsive to topical therapy. Methylprednisolone or prednisolone (1.0-1.5 mg/kg, q24h) may be used for 5 days, then tapered to an alternate-day regimen until inflammation has resolved. Treatment for chronic Pseudomonas otitis is typically required for at least 4 weeks and may last as long as 3 months. Therapy should be continued until the inflammation in the canals and the middle ear has resolved and cytology of the otic discharge appears normal.

*Susan Paterson, MA, VetMB, DVD, MRCVS, Dip ECVD
NAVC Clin Brf, 8:6*

Corneal stretching

This dog presented with a blind right eye, larger than the left; hyphema was also present. Linear opacities were observed across the cornea. The diagnosis was corneal stretching; the eye had been glaucomatous for a long time. Buphthalmos with lines across the cornea are pathognomonic for breaks in the Descemet's membrane due to corneal stretching in glaucoma. The lines are called *Haab's striae*. The owner should be informed that glaucoma is severely painful and that, even in the absence of obvious signs of discomfort, removal of a blind, buphthalmic, and likely painful eye is in the dog's best interest.

*Enry Garcia, DVM and Juliet R. Gionfriddo, DVM, MS
Vet Med, Feb 2011*

Cleaning up mercury spills

Thermometers being used in veterinary clinics constitute a small but significant source of mercury. When these products break, the mercury can evaporate, creating potentially high mercury vapor levels in indoor environments. Moreover, mercury that volatilizes when products break in the clinic or in the waste disposal system enters the environment and can be deposited in lakes and rivers, where it can be transformed into highly toxic methylmercury. One gram of mercury per year is enough to contaminate all the fish in a lake with surface area of 20 acres. A typical mercury thermometer contains approximately 0.7 grams of mercury. If addressed quickly and appropriately, breaking a fever thermometer is unlikely to threaten the health of clinic staff, clients or animals. Having a mercury spill clean-up kit is the best thing you can do to prepare for a mercury spill. Clean-up kits are available at many hardware stores or from several commercial suppliers. Here are some tips to keep in mind in addressing small mercury spills. Isolate the spill area. Pick up all visible mercury droplets. Use an index card and a plastic dustpan to push droplet away from porous surfaces and to combine droplets. Adhesive tape strips can be used to capture very small droplets. Never use a broom or a vacuum cleaner to clean up spilled mercury. Gently place mercury into an unbreakable plastic container that can be sealed. Either a plastic jar or a double-bagged zipper-locked sandwich bag can be used. DO NOT put mercury in the trash, in a burn barrel, or down a drain. Don't use household cleaning products to clean the spill

WI VMA NewsI, Mar 2011

Puppy and kitten vaccination protocol

In puppy and kitten vaccinations, (i.e., the “initial vaccine series”), what are the minimum and maximum intervals between doses? Most authors agree...avoid minimum intervals of less than 2 weeks. Reason: vaccine-induced interference; the first dose could interfere with the 2nd dose if given, say, 1 week later. NOTE: this is NOT antibody interference and, as such, is NOT antigen specific; e.g., a D-A2-P given this week and a rabies given next week *might* result in failure of the Rabies vaccine to immunize.

*Richard B. Ford, DVM, MS, Dip ACVIM
PA VMA Winter Sem Procd*

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