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THE CAPSULE REPORT On Animals

Small Animal/Exotic Edition

Our 30th Year

Volume 32, Number 11 February 2014

Effect of neutering on obesity

Because many cat owners prefer to feed free choice dry food, the risk of overfeeding, even in very small amounts is very high. In either case, the primary reason that weight gain occurs in cats is that they have a positive energy balance and this must be changed to affect weight loss. In both dogs and cats, neutering is an important risk factor due to the hormonal changes that occur that result in changes in levels of leptin, progestins, and other hormones that result in increased appetite, and reduced energy metabolism and metabolic rate. The key factors for prevention of obesity in neutered animals appears to be ***careful control of intake immediately after neutering*** (no free choice feeding, reduction of intake by 25% to account for the hormonal changes resulting in reduced energy needs), and close monitoring of body weight and BCS to allow adjustments in intake if needed.

Debra L. Zoran, DVM, PhD, DACVIM-SAIM
Gulf-Atl Vet Conf Procd, Oct 2013

Platelet therapy for osteoarthritis

Results of this study suggested that in dogs with osteoarthritis involving a single joint, administration of a single intra-articular injection of autologous platelets resulted in significant improvements 12 weeks later, as determined by subjective (i.e., owner-assigned scores for severity of pain and lameness) and objective (i.e., peak vertical force [PVF]) measures. To the authors' knowledge, the present study is the first to show subjectively and objectively that intra-articular platelet therapy can ***relieve pain in osteoarthritic dogs*** for up to 3 months, and the data supports the use of platelet therapy as an alternative treatment option. Platelets were recovered by using 55 ml of blood and the using a point-of-use filter. The platelets were then injected intra-articularly within 30 minutes.

Maria A. Fahie, DVM, Dip ACVS et al.
JAVMA, Nov 1, 2013

Tail vaccination in cats

Administering a vaccine in a cat's tail instead of in a limb is ***just as effective*** and makes for less invasive treatment if cancer forms at the injection site, the University of Florida reported in a study published online by the Journal of Feline Medicine and Surgery. The alternative vaccination protocol could give cat owners more reason to treat the cancer because many choose not to when leg amputation or disfiguring tumor removal is necessary. Current recommendations of the American Association of Feline Practitioners are to administer a vaccination below a leg's elbow, or knee joint. The researchers found no significant difference in a cat's tolerance of a tail vaccination and one given in a hind leg. Vaccinations in the tail are easy to perform and well tolerated by cats, which will hopefully mean that general practitioners will be willing to change their vaccination protocols and try this new location.

Julie Levy, DVM, PhD et al.
Vet Pract News, Dec 2013

INSIDE THIS ISSUE

Food allergy and atopy

It is now known that reactions to food ingredients can ***mirror the clinical signs of atopy.*** There appears to be cross reactivity between foods and inhalants, with grasses cross-reacting with grains as an example. It may be a good idea to start a therapeutic hypoallergenic diet in atopic dogs one to two months before their affected season. There are currently no over-the-counter hypoallergenic diets, despite some food manufacturers "alluding" to such. A study examining four over-the-counter foods labeled as venison-only contained soy, poultry and/or beef protein in the formulation, and these were not listed on the label. So it is important to use a therapeutic, veterinary-distributed hypoallergenic diet in treating or testing for food allergy. It appears that with therapeutic hypoallergenic diets, the ingredients are more or less guaranteed to be what the label states.

Alice M. Jeromin, RPh, DVM, Dip ACVD
DVM News Mag, 44:8

Health assessments for pets

Testing of 7,800 dogs revealed that nearly a third had abnormal findings on laboratory analyses that could indicate risk of disease, such as renal disease, endocrinopathies, or anemia, according to officials from Zoetis.

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Laboratory testing was performed on dogs presumed to be healthy in visits to 264 veterinary practices in a 5 1/2-year period. A similar number of dogs were found to have health risks based on the accompanying health risk assessment questionnaire. The survey questionnaire is similar to risk assessments in human medicine that are based on self-reporting. Zoetis sells the tests, surveys, and analysis of results to veterinarians through its Pet Wellness Report service. More than a quarter of pet owners surveyed indicated their pets appear to have periods of stiffness, lameness, or reluctance or difficulty in some activities. That increased to more than two-thirds among owners of dogs ages ≥13. Dogs brought in for yearly examinations were about four times as likely as those that were not to receive regular dental examinations. In addition, owners' answers to questions about heart-worm prevention revealed that about 3% of dogs that have yearly veterinary clinic visits and receive heartworm preventives during all 12 months of the year were positive for heartworms, as opposed to 10% of dogs that received neither.

JAVMA, Nov 15, 2013

Body condition scores and heart disease

Body condition AND muscle condition scores should be determined for every feline patient with cardiac disease at every visit. Body weight and body condition score, which primarily assesses body fat, are important because they have been associated with overall survival. Cats that are underweight and cats that are significantly overweight have the shortest survival while cats in moderate body condition (4-6/9) had the longest survival. The muscle condition score is a subjective score that assesses muscle condition in the areas of the epaxial, gluteal, scapula, and temporal areas and graded as normal muscle condition or mild, moderate, or severe muscle loss. Because of increased production of inflammatory cytokines in congestive heart failure (CHF), muscle is lost preferentially to fat. Therefore, even in overweight cats, significant muscle wasting can be present. This muscle loss has important clinical implications as it negatively impacts strength, immune function, wound healing, and survival. By assessing muscle condition at every visit, muscle loss can be identified at its early stages when intervention is more likely to be successful. Optimizing diet (e.g., ensuring nutritionally balanced diet with adequate calorie and protein intake) and omega-3 fatty acid supplementation can be beneficial for cats with CHF by reducing muscle loss.

Lisa M. Freeman, DVM, PhD and John E. Rush, DVM, MS
North Amer Vet Conf Procd, 01:13

Menace repose in muzzled dogs

Testing for a menace response is an important part of the neurologic examination in animals and often facilitates neuroanatomic localization of lesions. Fortunately, the test is benign and painless and can nearly always be performed without first putting a muzzle on the animal. Over the years, however, this author has begun to notice that menace responses were often either absent or markedly ***less robust in dogs that were wearing a muzzle*** when tested. This observation led the author to assess the menace response in 32 consecutive dogs evaluated at a referral neurology practice. The menace response was tested with and without a muzzle on the dog, in a randomized manner. If a dog failed to demonstrate a menace response when muzzled, the test was repeated after the muzzle had been removed. Twenty-nine of the 32 dogs had bilateral menace responses when tested without a muzzle. However, after a muzzle was applied, 20 of these 29 dogs either failed to demonstrate a menace response or had a response that was muted to such a degree that it was questionable whether the response was present. These findings suggest that it may be prudent to interpret menace deficits carefully in dogs wearing a muzzle when tested. The menace test is simple and benign, so practitioners may be better prepared to interpret menace responses in aggressive dogs that can only be tested with a muzzle in place by first comparing menace responses obtained in nonaggressive dogs with and without a muzzle.

John Speciale, DVM, Dip ACVIM
JAVMA, 242:7

Trazodone dosage

Trazodone has gained popularity for the long-term treatment of anxiety disorders in dogs and as an anxiolytic for short-term management of patients after surgery. Results of this study suggested that trazodone was well tolerated by dogs at oral doses of approximately 8 mg/kg; no clinically important adverse cardiovascular effects were observed after drug administration by that route. The findings of aggression, tachycardia, and ataxia detected during IV administration of the drug suggested that behavior disinhibition was a serious adverse effect of high plasma trazodone concentrations. Given the serious adverse effects detected after IV administration of trazodone to dogs, a substantial reduction in the dose is strongly recommended when injecting the drug via a parenteral route, and limited use during the perianesthetic period may be indicated. Trazodone may be most clinically useful as an oral formulation administered after complete recovery from anesthesia in patients after surgery.

Ariane Jay, DVM et al.
Am J Vet Res, Nov 2013

Measuring cortisol in hair

In humans, hair cortisol analysis helps assess chronic stress, drug exposure, malnutrition, and hypercortisolism. In this study, cortisol measurements of hair were investigated as an alternative or adjuvant noninvasive way to document hyperadrenocorticism (HAC). A great deal of investigation is warranted before this

test can be considered a viable and reliable alternative to current tests. Of more interest is application of stress measurement in dogs and cats. How many times have we read the descriptor in stressed animals? Yet, we have no way of measuring or determining stress. The development of hair cortisol concentrations as they correlate (or not) with disease should be followed. This also has great potential for behavior studies, with direct applicability for measuring changes in management that increase or decrease stress. The latter would be particularly important in shelter animals or in any animal living for long periods in captivity.

Karen A. Moriello, DVM, Dip ACVD et al.
NAVC Clin Brf, Nov 2013

Effect of neutering on cancer and behavior

Veterinarians, have two concerns about delaying neutering. One is an increased risk of mammary cancers in females, and the other is an increased risk of problem behaviors, such as aggression, in males. With regard to mammary cancer, this author points to a recent meta-analysis that concluded there is only a weak link, if any, between sexually intact females and an increase in the rate of mammary cancer. Also, research shows that neutering males in adulthood, after the onset of problem behavior, is as effective in changing the behavior as neutering before puberty is in preventing the problem.

Dr. Benjamin L. Hart
Am J Vet Res, Dec 2013

Using Aredia for hypercalcemia

In cancer treatment, the clinician should also address the presence of paraneoplastic syndromes even if specific antineoplastic therapy is not contemplated. For example, treatment of hypercalcemia of malignancy with bisphosphonates causes ***remarkable improvement*** in the quality of life of affected dogs. The author has used pamidronate (Aredia) at a dosage of 1 mg/kg, IV, q6-8wk) in dogs with tumor-associated hypercalcemia in which the neoplastic disease could not be surgically removed or that had failed chemotherapy. In most dogs, serum calcium concentrations were maintained within normal limits, and appreciable toxicity was not noted.

C Guillermo Couto, DVM, Dip ACVIM
35th Royal Canin/OSU Symp Procd

Use of L-carnitine in feline weight loss

Weight loss is safely achieved in cats regardless of whether diet is supplemented with L-carnitine, implying L-carnitine may not provide any advantage in a weight-loss program. However, L-carnitine supplementation is associated with improved metabolism, including increased fat oxidation and decreased carbohydrate metabolism. This is more compatible with natural feline metabolism; therefore, despite no advantage in acceleration of weight loss, the addition of carnitine to a weight loss program may provide subtle advantages that may protect against pathologic states, such as feline hepatic lipidosis.

Jennifer Ginn, DVM, MS, Dip ACVIM
NAVC Clin Brf, 11:2

Forward booking

The average U.S. veterinary hospital is leaving $40,000 annually on the table in preventive care revenue by not booking follow-up visits when owners and their pets initially come in, according to the American Animal Hospital Association. A joint survey conducted by AAHA and Idexx looked at veterinary hospitals that demonstrated year-over-year revenue growth for 2011-12 of more than 10 percent, termed “Growers,” and those that showed declining revenue, called “Decliners.” A key growth factor involved “forward booking,” or the scheduling of a pet’s next wellness check before checkout.

Vet Pract News, 25:5

Management of feline heartworm disease

Cats with heartworm infection (HWI) should be placed on a monthly preventative and short-term corticosteroid therapy (prednisone at 1-2 mg/kg, q48h-tid) used to manage respiratory signs. If signs recur, alternate day steroid therapy (at the lowest dosage that controls signs) can be continued indefinitely. For respiratory emergencies, oxygen, corticosteroids (dexamethasone at 1 mg/kg, IV or IM or prednisolone sodium succinate at 50-100 mg, IV/cat) and bronchodilators (aminophylline at 6.6 mg/kg, IM, q12h, theophylline sustained release at 10 mg/kg, PO or terbutaline at 0.01 mg/kg, SQ) may be employed. Bronchodilators have logic, based on the ability of agents, such as the xanthines (aminophylline and theophylline), to improve function of fatigued respiratory muscles. In addition, the finding of hyperinflation of lung fields may indicate bronchoconstriction, a condition for which bronchodilation would be indicated. Nevertheless, this author does not routinely utilize bronchodilators in feline heartworm disease. Recently, doxycycline (10 mg/kg/day for 30 days) has been used to clear *Wolbachia* from a heartworm-infected dog with proteinuria and antibodies against *Wolbachia,* in hopes of reducing proinflammatory mediators (e.g. interleukin 8), prior to adulticidal therapy. While logical, there are no published studies to indicate that the use of doxycycline should become routine practice in the management of HWI.

Clarke e. Atkins, DVM, Dip ACVIM
New Eng Vet Conf Procd, Sep 2013

Renal diet

This study shows that dietary protein restriction does not enhance survival in dogs with chronic kidney disease (CKD) as long as the diet is phosphorus restricted. In addition, higher dietary protein levels in combination with a prebiotic fiber blend that enhances enteric dialysis, n-3 PUFAs, and antioxidants is advantageous in maintaining a better body condition score in dogs with CKD. Now that research documents that it is unneces-

sary to protein-restrict these patients, as long as other nutritional components are included in the diet, there is less concern about feeding a higher-protein therapeutic renal diet to a patient in earlier stages of CKD on a long-term basis, especially in aging patients where dietary protein requirements may actually be higher than in younger patients. It is still best to make dietary recommendations on a case-by-case basis for patients that fall within this stage of renal disease.

NAVC Clin Brf Supp, Dec 2013
Sherry Lynn Sanderson, DVM, PhD, Dip ACVIM

Cobalamin for chronic diarrhea

In many dogs with chronic diarrhea a definitive cause cannot be identified after the initial work-up and therapeutic trials can be very helpful in identifying the underlying cause. Firstly, serum cobalamin is not only of diagnostic but also of therapeutic interest. Patients with severe cobalamin deficiency often do not respond to therapy of the underlying gastrointestinal disorder until cobalamin is supplemented. Cobalamin supplementation has to be by parenteral administration of either cyanocobalamin (most commonly used) or hydroxocobalamin at 250 (in small dogs) - 1500 µg (in giant dogs) per injection, SQ, q7days, for 6 weeks, q30 days for one injection and should be followed by reevaluation of serum cobalamin one month later.

Jörg M. Steiner, med.vet, Dr.med.vet, PhD, Dip ACVIM
35th Royal Canin/OSU Symp Procd

Distinguishing localized demodicosis

There is no uniformly accepted standard which defines exactly what localized demodicosis is. In the author's opinion this is a disease where the animal has no more than four small localized areas of alopecia, erythema, and scaling. These lesions typically are seen on the face and/or forelimbs and rarely are infected. Bilateral involvement of the ear canals without any other skin lesions is also a localized condition. Cases which have more than 4 discrete spots, have an entire body region like the head involved, or have pododemodicosis of all 4 feet should not be categorized as localized demodicosis but rather as a ***localized presentation of generalized demodicosis.*** This differentiation is important because dogs with generalized demodicosis, even in its most mild form, have a genetic predisposition to this disease. They should not be used for breeding and might experience a relapse later in life. The ease of differentiating localized from generalized disease depends on the duration of the clinical signs before presentation. It typically takes a puppy 4-8 weeks to develop all of its localized spots to their maximum extent. If the case is presented with lesions this old, the odds of the dog developing additional lesions is small and the diagnosis of localized demodicosis can be made. If the spots were just recognized, a re-examination in a month will be needed before an accurate assessment can be made.

William Miller Jr., VMD, Dip ACVD
Gulf-Atl Vet Conf Procd, Oct 2013

E-collar for prevention motion sickness

For years, one of this clinician's patients vomited every time it rode in a car. Countless cleanups later, the author performed a minor surgical procedure on the senior cat that necessitated the placement of an Elizabethan collar. Miraculously, for the first time in its traveling life, the cat did not vomit on the way home, and, still wearing the E-collar, the cat didn't vomit on the way back to the clinic for suture removal. Since then, the author has suggested E-collars as a treatment for car sickness for more than a dozen cats and even a couple of dogs, and, anecdotally, it seems to work.

Tom Morganti, DVM
Vet Med, Nov 2013

Fatty acid therapy for pruritus

Fatty acid therapy has been popular as adjunctive therapy for the pruritic patient (primarily allergic) with the expectation of 25%-35% response rate. As a non-steroidal therapy, essential fatty acids are often combined with antihistamines for additive effect or used with low dose oral glucocorticoid treatment. Essential fatty acids are used because of their affect on the arachidonic acid cascade which results in pro-inflammatory mediators of pruritus. Therapeutic effect (according to some manufacturers) requires 45-60 days to achieve optimal response. Both omega 6 & omega 3 fatty acids may be helpful to reduce inflammation, although it is generally accepted that emphasis of omega 3 fatty acids are the primary choice for pruritus whereas omega 6 fatty acids are indicated for scaling disorders. Eicosapentaenoic acid (EPA) is a common supplement included in commercial products and has been used at a dosage of 180 mg/10 pounds. High dose fatty acids should be used with caution in dogs with tendency toward pancreatitis, diarrhea or bleeding disorders. Essential fatty acids are incorporated in some of the specialty diets used in dermatology and may be another source of them. The amount of fatty acid in these feeds may not provide the level of eicosapentaenoic acid suggested as the ideal amount. Supplementation with additional n-3 fatty acids has not been deleterious in dogs on a diet containing essential fatty acids although reports indicating that the amount of fatty acids in the selective diets may not warrant additional supplementation.

John MacDonald, MEd, DVM, Dip ACVD
Gulf-Atl Vet Conf Procd, Oct 2013

Coming next month: Benefits of long-term use of NSAIDs