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Use of long-term NSAIDs

There is no doubt regarding the efficacy of NSAIDs in providing pain relief in dogs with OA. These drugs can be used in young dogs to provide pain relief, which in turn allows exercise to be performed, which provides pain relief in its own right. There is increasing evidence that the ***longer term use of NSAIDs results in greater improvement than short-term use,*** and no obvious relationship between longer term use and an increase in the incidence of side effects. The author uses NSAIDs in young dogs for several months, during which time exercise is optimized, body-weight weight optimized and then the NSAIDs can be reduced or stopped while maintaining the improvement in function. In some instances, adjunctive drugs (non-NSAID pharmaceuticals), are used instead of NSAIDs in young dogs, with the assumption they will be 'safer,' and still provide pain relief. In fact, there is little to no evidence that non-NSAID pharmaceutical have an analgesic effect.

B. Duncan X. Lascelles, BSc, BVSC, PhD, MRCVS, Dip ACVS
N Amer Vet Conf, 01:13

Secret weapon for pyoderma—bathing

Topical antimicrobial shampoo is not just for treating active pyoderma, but also aids in reducing recurrence. Frequent bathing accomplishes multiple, high value goals. Continued application of antimicrobial shampoo to the skin suppresses bacterial re-colonization prior to development of clinically significant infection. Additionally, emollients and other ingredients, such as phytosphingosine, can help normalize and restore a disrupted epidermal barrier. Finally, for dogs with atopic dermatitis, bathing assists removal of allergens and irritants from the skin. Humans inhale their allergens, but for dogs, evidence points towards absorption of allergens across the skin. Conditioners that contain emollients and antimicrobials are additionally beneficial. Clients are more likely to continue to use a product that is appealing to them; therefore, medicated shampoos with superior aesthetic characteristics improve client compliance. Proper instructions to clients are essential. Since 5 minutes contact time is necessary to maximize antiseptic benefit, many veterinarians request owners apply the shampoo for 10 minutes before rinsing. A different approach is to direct owners to apply shampoo to the problem areas first, move on to the rest of the body, and rinse problem areas last. Even the most impatient owner will achieve maximal contact time on areas of active infection. Without specific instruction owners will typically start on the dorsum, which is rarely the most affected area. After pyoderma is resolved, owners should continue to focus on previous areas of infection, as these are the most likely areas to recolonize.

John C. Angus, DVM, Dip ACVD
San Diego Co VMA Conf, 09:12

INSIDE THIS ISSUE

Coccygeal epidural for urethral obstruction

Recently, the use of a coccygeal epidural (in addition to sedation) with 2% lidocaine has been described in cats with urethral obstruction. An injection of preservative free lidocaine is administered either in the sacral-coccygeal epidural space or between the first and second coccygeal vertebrae. The benefit of this regional anesthesia technique will be to cause maximal urethral relaxation and may decrease the amount of additional analgesics needed for the unblocking procedure and for analgesia while the urinary catheter is in place.

Erica L. Reineke, VMD, Dip ACVECC
VECCS Symp, 04:13

Miconazole for canine pyoderma

Increasing recognition of methicillin-resistant *Staphylococcus pseudintermedius* (MRSP) in veterinary medicine has resulted in more interest in antimicrobial properties of topical treatments (eg, mupirocin, fusidic acid). Topical products can deliver high drug concentrations to an affected area with little or no systemic absorption. Miconazole, an imidazole antifungal, has antibacterial properties against some bacteria. This study suggested that miconazole may effectively treat superficial bacterial pyoderma in dogs. Miconazole, traditionally considered an antifungal agent, has antibacterial properties, making miconazole topical shampoo

 Acute abdomen; P 4

products an ***excellent first choice*** for dogs with skin infections exhibiting bacterial and yeast overgrowth and those with skin diseases predisposing them to Malassezia dermatitis. Topical treatments require frequent and thorough application to be effective, and coat hygiene is important in dogs with chronic skin disease. Professional grooming can be helpful before therapy, as medicated shampoos (often expensive) are not ideal grooming shampoos. Prewashing with grooming shampoo to remove gross debris and rinsing thoroughly before applying a medicated shampoo may be best. To avoid irritant reaction, clients can make a sudsy solution of the shampoo in a container and apply that to the hair coat; this makes it easier to rinse the pet and minimizes shampoo residue.

J.S. Weese et al.
NAVC Clin Brf, 11:5

Signs of atopy

Most recently, Favrot et al. conducted an extensive study involving detailed statistical analysis of a very large group of geographically-diverse atopic dogs. This study has yielded the most useful, validated set of criteria to date. Using these criteria, one can propose a clinical diagnosis of canine AD with 85% sensitivity and 79% specificity, if any five of the eight criteria are met. Further refinement of the accuracy of the diagnosis can then be achieved by ruling out other common skin conditions that mimic AD. The eight criteria are: 1) Age of onset <3 years; 2) Dog lives mostly indoors; 3) Corticosteroid-responsive pruritus; 4) Chronic or recurrent yeast infections; 5) Affected front feet; 6) Affected ear pinnae; 7) Non-affected ear margins; 8) Non-affected dorsal lumbosacral area. One must remember that these criteria are useful for the diagnosis of typical or "classical" atopic dermatitis, and that atypical presentations may occur, which will not satisfy the criteria. In addition, the approximately 80% specificity means that if they are strictly applied, one will make an incorrect diagnosis in 1 out of 5 dogs!

Douglas J. DeBoer, DVM, Dip ACVD
MI Vet Conf, 01:13

Use of NT-proBNP in the cat

NT-proBNP concentration has been found to be useful in differentiating cardiac disease from respiratory tract disease in cats evaluated at referral institutions. Using a cut-off of 265 pmol/L, the assay was 90% sensitive and 88% specific for differentiating between dyspneic cats with congestive heart failure (CHF) and dyspneic cats with respiratory disease. These results are very good, since it means that with a value over 265 pmol/L only one out of 10 cats with CHF would be missed and only one out of 10 cats with this value is going to have respiratory disease as the underlying cause for dyspnea. The only downside at this time is that the NT-proBNP assay is a send-out test so that in the true emergency patient it is of limited value.

Anthony P. Carr, Dr.med.vet., Dip ACVIM
N Amer Vet Conf, 2014

Management of flare ups of pruritus

Consider other reasons for the exacerbation first and address (i.e. infection, parasites, not adhering to proposed management plan). If glucocorticoids are deemed necessary, this author recommends prednisone at 1 mg/kg, PO, q24h, for 3 days as a "crisis buster." This short course of prednisone typically provides sufficient reduction of itch and offers about 7-14 days of relief. Such "crisis busters" may be used occasionally in the chronic management of pruritic skin diseases such as atopic dermatitis. The frequency of intervention should be logged by the owner so you can assess feedback at reevaluations and adjust the overall management if too many "crisis busters" are being given.

Lauren Riester Pinchbeck, DVM, Dip ACVD
CVC, Wash DC Conf, 04:12

A pet nutrition website

The Pet Nutrition Alliance has developed a website to provide veterinary professionals with credible resources on pet nutrition. The AAHA, the AVMA, and other veterinary organizations established the PNA to promote the importance of proper pet nutrition and the value of nutritional assessments for ***every pet at every veterinary visit***. The PNA website offers a collection of tools on pet nutrition for veterinary professionals to use in practice and to educate clients. A PNA committee developed the website by compiling existing resources on pet nutrition and writing answers to frequently asked questions. The website does not have any company branding, although some of the tools come from companies. Some of the tools include online training on weight loss programs for pets; a "Healthy Weight Protocol" tool to determine an overweight pet's ideal weight; feeding guides and charts; a tool to translate pet weight to comparable human weight; printable client information sheets; and much more. The website is at **www.petnutritionalliance.org**.

JAVMA, Mar 15, 2014

Arthritis in the cat and NSAIDs

Weight reduction is important if a cat is overweight; however, a lot of older cats are not overweight. Also, NSAIDs and cats may not go well together. Because about 20% of older cats have some degree of renal disease, it is a concern. However, two recent retrospective studies looked at cats receiving a NSAID; one study evaluated renal function and the other evaluated longevity. Based on these study findings, this author thinks if you use an NSAID correctly and taper to

a low dose, feed moist food to increase the cat's fluid intake, and monitor the cat with regular blood tests, a NSAID may relieve the pain and give the cat a ***much better quality of life***. This author always administers a nutraceutical along with NSAIDs in cats and dogs.

David Bennett, BSc, BVetMed, PhD, DVM
Vet Med Supp, Feb 2014

Heartworm app for veterinarian and client

The American Heartworm Society has released a new app designed to help veterinarians explain heartworm treatment to clients whose dogs are infected. The app makes it easy for the veterinarian to (1) determine the proper medication dosage, and (2) create a customizable treatment plan that can be printed or e-mailed to the client. The app also includes an educational video and a new heartworm life cycle illustration to help veterinarians educate their clients about the disease. To use the app, visit www.heartwormtoolkit.com on your mobile device.

DVM News Mag, Mar 2014

Dosing of tramadol

Tramadol can be administered with or without food and is readily absorbed, extensively metabolized, and rapidly eliminated in dogs and cats. Because dogs metabolize 99% of tramadol, dose adjustments may be needed in dogs with renal or hepatic impairment. Optimal dosing of tramadol in dogs and cats will likely require adjustment based on its effects in individual animals. Tramadol dosing in dogs varies, with suggested doses ranging from 2 to 5 mg/kg, q8-12h. The highest dose for maximum analgesic effect in dogs is 10 mg/kg, q8h. The dose suggested by the pharmacokinetic profile of tramadol alone in normal dogs is 5 mg/kg, q6h or 2.5 mg/kg, q4h. The dose can be decreased and/or the dosing frequency increased with concurrent use of other analgesic drugs or techniques. Analgesia may not occur immediately and can take up to 14 days when treating chronic conditions (e.g., cancer, degenerative joint disease). Tramadol is formulated as a 50-mg unscored tablet, which can make feline dosing difficult. To treat cats, tramadol can be compounded as a suspension or a gelatin capsule to provide 2- to 4-mg/kg doses. However, compounding pharmacies function under minimal regulation and are not required to prove product efficacy or safety. The oral dose for the treatment of chronic pain in cats has been suggested at 5-10 mg/kg, q8-12h. The terminal half-life of tramadol in cats is 2.5 hours. In cats, doses of 1-4 mg/kg, q12h are necessary for significant and sustained analgesic effects. A dose of 4 mg/kg, q6h would maintain analgesia close to the maximum effect of tramadol. Tramadol is a relatively inexpensive generic drug. A human tramadol product is available (Ultracet) but should not be used in cats, as it contains acetaminophen. Acetaminophen is used in dogs, although it has not been FDA approved.

Jane E. Quandt, DVM, MS, Dip ACVAA
NAVC Clin Brf, 11:10

Analgesia for arterial thromboembolism, cat

If the client decides to proceed (understanding the costs of intensive care, the near certainty of underlying disease, and the risk for future ATE), the first and most important treatment is analgesia with a mu agonist for the first 24–48 hours following an event. While there are no comparative studies of pain control in this condition, fentanyl is most commonly used in the author's practice and provides good to excellent analgesia. Transdermal therapy is too slow in onset for management of this severe pain and IV administration is needed. Although fentanyl has been administered intravenously to healthy cats at a "slow bolus dose" of between 5-10 µg/kg, it is suggested to initiate therapy with a lower dose of 3 µg/kg (very slow IV bolus) and follow that with an intravenous maintenance infusion of 1-5 µg/kg, per hour (not per minute). Morphine (0.1- 0.2 mg/kg, IM or SQ, q6h) or buprenorphine (0.005-0.01 mg/kg, IM or SQ, q6h) represent other options. Buprenorphine can also provide some analgesia when administered at 0.01-0.02 mg/kg (10-20 µ/kg) on the buccal (oral) mucosa, and it may be useful to dispense one or two doses to clients for immediate administration should an ATE occur at home. In the absence of hypothermia or hypotension, acepromazine (0.025 mg/kg, SQ) will sedate the cat further. Pain in most cats is markedly diminished by 48 hours, allowing for less aggressive analgesia.

John D Bonagura DVM, MS, Dip ACVIM
Mich Vet Conf, 01:03

Leafy green diet for rabbits

The final aspect of diet for the typical indoor rabbit is the leafy greens. There is a large laundry list of potential greens, but to provide variety and make it easier for the owner, the ***pre-packaged spring mix greens should be considered***. There have been concerns that feeding too many greens can lead to diarrhea, however, succulent leaves are the normal core component of wild rabbit diets. Where problems seem to arise is introducing this component of the diet to a rabbit previously not exposed to greens, in large volumes, versus gradual introduction. Thicker vegetables, fruits, nuts, and the colorful cereal components of some "deluxe" pelleted diets should NOT be fed to rabbits. The primary concern is that all of these items are starches. In the GI system, they are broken down from complex carbohydrates to simple sugars. Sugars are acidic. This acid wash hits the normally basic pH of the lower GI and can significantly alter the microflora. Problems include death of normal organisms, leading to overgrowth of undesired organisms or the release of endotoxins from dying commensal organisms. In most cases, the rabbit manages this GI upset with no obvious outward clinical

signs. However, over time the odds that this will cause a problem do rise. Most causes of diarrhea in the rabbit can be attributed to incorrect diet.

Eric Klaphake, DVM, Dip ACZM
MT VMA Conf, 06:12

Treating heatstroke

Wetting of the animal and placing it in front of a fan utilizes evaporation, conduction, and convection and is the safest method of cooling. Concurrent muscle massage is recommended to maintain circulation. Ice water baths should be avoided since they cause cutaneous vasoconstriction and shunt warm blood to the core. Alcohol on the footpads is likely ineffective because of small surface area. Gastric lavage, peritoneal lavage, and cold water enemas should be avoided due to invasiveness, risk for fluid balance and electrolyte complications, and risk for septic peritonitis. Rectal temperature should be monitored frequently during cooling measures and discontinued when the patient's temperature has reached 103.5-104ºF to avoid rebound hypothermia.

Dana L. Clarke VMD, Dip ACVECC
AVMA Conv, 08:12

Tapering prednisone in IMHA

Once the hematocrit has been normal and stable for 7-14 days, you can feel comfortable starting to taper. There is no single tapering schedule that has been proven to be more effective or prevents relapse. Prednisone is typically the first drug that is tapered, because that is the drug that has the least tolerated side effects by owners. As a general rule, prednisone should be tapered by 25% every 3-4 weeks over a course of 4-6 months. Some people will taper more aggressively—50% every 2-4 weeks, especially if they are at the high end of the dosing range or if they are on a number of other immunosuppressives. Relapsed patients or patients that were difficult to get into remission, should be tapered more slowly, at 4-6 week intervals so these patients end up being on drugs for 6-12 months. Although not well documented, rates of relapse have been reported by retrospective studies as 12%-24%. Relapses can occur anytime during or after treatment, with some dogs relapsing months to years after treatment. Relapses can be seen as a minor drop in HCT or a major drop, with fulminant hemolysis. To help avoid relapse, avoid tapering medications too quickly! If a minor relapse occurs during the taper return to the previous higher dose for a longer period of time and reduce the dose more gradually.

Renee K. Fenty, DVM, Dip ACVECC
So Cal VMA Pulse, 58:1

Treatment options for *Demodex gatoi*

Most will show some improvement within 1-3 weeks; treatment generally lasts 6 weeks. **Lime sulfur** (topical leave-on): Considered the safest treatment, administered q4-7d for 6 weeks. Higher concentration (i.e., 8 ounces of sulfur in 120 ounces of water, mixed thoroughly; cats tolerate warm water better) is recommended for quicker resolution. Solution should thoroughly soak coat and skin; a rose or garden sprayer can be used for administration. Cats should not be rinsed and should be kept warm in a well-ventilated area. **Aqueous ivermectin:** 0.2-0.3 mg/kg, PO, q24h or mixed in canned cat food for upward of 6 weeks. Cats can develop neurotoxicosis; toxicosis signs include lethargy, ataxia, hypersalivation, tremors, mydriasis, blindness and bradycardia. **Doramectin** (Dectomax injectable): 600 µg/kg, SQ, q1wk. It has the potential for adverse effects similar to those cited for ivermectin. **10% moxidectin** & 2.5% **imidacloprid** (Advantage) This has only been approved for use in dogs, but the author has successfully treated with this in a small number of cats at q7d or q2wk.

Karen Moriello, DVM, Dip ACVD
NAVC Clin Brf, 11:6

Sedating the cat for anesthesia

It is the rare cat which has been socialized to being handled for examination in a veterinary hospital; this means that important procedures (physical exam, blood work, IV catheterization) may be significantly more difficult to accomplish. Yet, these are important for safe anesthesia, so it is worthwhile to be patient and try to provide a calm atmosphere for the cat. When sedation is necessary, this author has found that acepromazine (0.025-0.05 mg/kg) with butorphanol (0.2-0.4 mg/kg) or butorphanol with midazolam (0.2 mg/kg) may be sufficient to relax the cat enough for these procedures. If not, it is generally safe to add ketamine (2-5 mg/kg) to provide additional sedation without unduly depressing the cat.

Nora S. Matthews, DVM, Dip ACVA
West Vet Conf, Feb 2014

Acute abdomen

It is imperative to evaluate the PCV in light of the TS findings. An elevated PCV with a normal TS (~≥6.0) may indicate dehydration, making hemorrhage less likely. A normal PCV with a low TS often indicates hemorrhage in acute abdomen patients, and intra-abdominal bleeding from a ruptured splenic mass or GI hemorrhage is the most common cause. The TS is a more sensitive indicator in this instance, as the spleen will contract, masking a decreased PCV. A very high PCV (~≥60%) with a normal to low TS and hematochezia ± hematemesis is often present in cases of hemorrhagic gastroenteritis.

Brando Garcia, DVM, Dip ACVECC
80th AAHA Conf

NOTE: Index, Vol 32 (April 2013-March 2014) is available on our website