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Anesthetizing aggressive cats

Because of the potential for extremely sick cats to remain aggressive (sometimes in spite of opioid administration or restraint), an IM injection may be difficult and stressful; thus chamber inhalant induction is often required. This is a good choice in aggressive cats with suspected renal failure or in older cats with an unknown medical condition. Isoflurane and sevoflurane are suitable inhalants, but it is best to delay induction to general anesthesia until the cat's epinephrine release has minimized. Allow the animal to calm down in the tank before turning on the inhalant. Oxygen should be provided, and a towel over the chamber may initially help to reduce the animal's anxiety. Observe the animal frequently during induction, and move the tank to assess the level of restraint achieved. Remove the cat, and transfer it to a mask as soon as possible to allow better depth evaluation. Recognize that complete anesthetic induction is not always required for restraint and that sedation alone is possible with inhalants. If respiratory depression or obstruction occurs with this degree of restraint, complete induction and intubation are required; so be prepared. The patient requires cautious monitoring during this time (whether restraint or anesthesia is provided) while catheter placement, blood samples, and other diagnostic assessments may be occurring.

Doris H. Dyson, DVM, DVSc
Vet Clin N Amer, 38:6

INSIDE THIS ISSUE

Otitis externa

Moderate to severe cases of otitis externa usually benefit from systemic glucocorticoids at relatively high doses (prednisone/prednisolone/methylprednisolone orally at 1-2 mg/kg/day). Glucocorticoids have also been shown to aid in the elimination of resistant Pseudomonas strains through changes in the microclimate that no longer favor the growth of the bacteria. Many of the topical antimicrobial combination products containing an antifungal should be effective for Malassezia otitis. Since there is little concern about the development of resistance in Malassezia, this author will sometimes use oral antifungals, such as ketoconazole 5 mg/kg, q24h, itraconazole 5 mg/kg, q24h, or fluconazole 5-10 mg, q24h for 2-4 weeks for recurrent Malassezia otitis. Over the years, the author has discovered that most ***owners have no idea how to properly clean their dog's ears.*** The following link is for a video for owners showing how to clean a dog's ear: www.youtube.com/watch?v=brCwQftfJ0o&feature=plcp.

Anthea Schick, DVM, Dip ACVD
13th Tri St Vet Derm Conf Procd, 2012

Differentiating a cough from vomit in the cat

Differentiate a cough from vomiting with tracheal compression. It is surprisingly difficult for many clients to differentiate coughing from vomiting. Most clients have seen their cat "cough up" a fur ball, and coughing cats frequently take the same stance as cats trying to expel a trichobezoar. Failure to accurately define the problem may result in an inappropriate and non-diagnostic work-up. Compression of the trachea in a ventral-dorsal plane (compress the trachea against the cervical vertebrae) will quickly define the problem. The cat with vomiting will only cough once or twice, but the cat with true cough will have a paroxysmal cough that often stimulates the client to say "Yeah, just like that."

Kenneth Harkin, DVM, Dip ACVIM
Cent Vet Conf Procd, 09:07

Intestinal lymphosarcoma in the cat

Intestinal lymphosarcoma is likely ***the most underdiagnosed*** cause of chronic gastrointestinal disease and vomiting in the cat. Of the last 100 full thickness feline intestinal biopsies that the author has evaluated, 35 were positive for lymphosarcoma, 60 were positive for some degree of inflammatory bowel disease and 5 were normal. Six cases that were originally diagnosed as IBD were later confirmed as lymphosarcoma within 1 year. All 35 positive cases were from three clinics that regularly perform laparotomy-obtained full thickness biopsies. The likelihood of diagnosing feline intestinal lymphosarcoma is more a measure of the

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surgeon's willingness to perform full thickness intestinal biopsies than it is the actual incidence of the disease. Twenty to thirty percent of cats with chronic GI disease are likely due to lymphosarcoma. If a veterinarian who regularly sees cats has not made the diagnosis of intestinal lymphoma in the last year, it is probably only because he or she has not performed any full thickness intestinal biopsies. For information on submission of biopsies go to: http://texvetpath.com.

Gary D. Norsworthy, DVM, Dip ABVP
Music City Vet Conf Procd, 03:02

Emesis with hydrogen peroxide

In this study, 3% hydrogen peroxide solution and apomorphine effectively induced emesis in dogs when used as directed. Emesis occurred within minutes after administration and helped recover substantial amounts of ingested agents. Adverse effects of both emetics were considered mild and self-limiting. The ***recommended dose*** for induction of emesis with 3% hydrogen peroxide solution was 1 ml/lb, PO, to a maximum of 45 ml/dog, repeated once after 10-15 minutes if vomiting did not occur. The recommended dose of apomorphine hydrochloride was 0.014 ml/lb, IV, once, or a crushed tablet dissolved in saline solution, instilled in the conjunctival sac, and rinsed away with water or saline solution after emesis (resulting in a dose to effect).

Safdar A. Khan, DVM, PhD, Dip ABVT et al.
JAVMA, Nov 1, 2012

Golden Retriever Ichthyosis

Golden retrievers are genetically predisposed to ichthyosis, a primary cornification defect in which affected individuals produce large "flakes" of scale that are primarily truncal in distribution (especially lateral and ventral). With chronicity, the skin tends to hyperpigment (when admixed with scaling, often producing a "salt and pepper" appearance). Therapeutic alternatives available to date have included: *Option 1:* Combination of antiseborrheic shampoo 1-2 times weekly (e.g., Keratolux), along with topical propylene glycol (Humilac) used daily or every other day; oral omega-3 fatty acids (combination of EPA and DHA, beginning at 30-40 mg/kg of the combination); omega-6 fatty acids (safflower oil, 0.5 ml/kg/day), and oral vitamin A (800-1,000 IU/kg divided and given BID). *Option 2:* Option 1, initiated by intense "oil" baths. Patient is "oiled down" with Alpha Keri Bath oil (or a cheaper generic), diluted 50:50 with water; it can also be used up to full strength. The oil is left on for about 1 hour, then thoroughly rinsed out. More intense oil therapy is used as necessary. This is repeated once every 3-4 weeks to begin with. *Option 3:* Douxo Seborrhea Shampoo (phytosphingosine, cationic surface-active agents, Fomblin; www.douxo.com), every 3 days for 3-4 shampoos, then either Douxo Seborrhea Micro-emulsion Spray (phytosphingosine, glycerin, *Botswellia serratd*) every 3 days (one pump in axilla, shoulder, lower back sides, ventral abdomen) or Douxo Seborrhea Spot-on (Phytosphingosine, Transcutol [an excipient]) 1-2 times per week (in dogs <20 kg, 1 pipette over the back; 20-45 kg, 2 pipettes over the back; >45 kg, 3 pipettes over the back). The author has commonly used this regimen with omega-3 and omega-6 fatty acids and oral vitamin A. *Option 4:* Doxycycline, 5 mg/kg, BID as a "sole" therapy or with topicals noted above.

Rod Rosychuk, DVM, Dip ACVIM
79th AAHA Conf Procd

Pediatric vaccinations for the kitten

The goal of pediatric vaccination is to stimulate active and solid immunity before the susceptible kitten is exposed to pathogenic organisms. This means that we must start a vaccination program early enough to prevent active disease as maternal antibody wanes. The pediatric core FVRCP vaccine series should be started when the kitten is seen for its first pediatric examination at 6-8 weeks of age. Core vaccines should be repeated at 3-4 week intervals until the kitten or puppy is 16 weeks of age. Although some biologics manufacturers have experimental studies that demonstrate good protection by 12 weeks of age, recent research using conventional kittens indicates that maternal antibody interference with vaccination may persist in some kittens beyond 14 weeks of age. Therefore, this author recommends administering the final pediatric vaccination at 16 weeks of age or older. Rabies vaccine should be given at 12 weeks of age or older as per the Rabies Compendium and state/local ordinances. The author recommends using only a non-adjuvanted rabies vaccine for cats and a 3-year licensed rabies vaccine for dogs.

Alice M. Wolf, DVM, Dip ACVIM
1231st SD VMA Conf Procd

Gastric foreign body as risk factor for GDV

In this study, it was found that the presence of a ***gastric foreign body is a significant risk factor*** for gastric dilatation-volvulus in dogs. The study involved 118 large- or giant-breed dogs that underwent surgery because of GDV and 342 large- or giant-breed dogs that underwent abdominal surgery for reasons other than GDV. Twelve (10.2%) dogs with GDV had a gastric foreign body (Gfb), compared with 11 (3.2%) control dogs. Dogs with a gastric foreign body were 4.9 times as likely to have GDV as were dogs without a foreign body. If a dog is predisposed to GDV, based on previously identified risk factors, the owner may be counseled on the increased chance of development of GDV if a concomitant gFB is present. Accordingly, endoscopic or surgical removal with or without gastropexy could be suggested to the owners as an alternative approach.

Anna de Battisti, DVM et al.
JAVMA, Nov 1, 2012

The Pruritic patient

Be sure you are dealing with allergies and not something else. In the uncontrollable itchy the first diagnosis to look for is scabies. These patients may not eat or sleep well because of pruritus and can lose a significant amount of weight. The problem is that diagnosing scabies can be difficult. Only about 50% of dogs with scabies will have positive skin scrapes. Therefore, it is very important to treat for scabies to rule it out. If using Revolution or Advantage Multi or ivermectin, be sure to treat every other week for 3 treatments. Remember that for the first one to two weeks the patient may be worse before he gets better. Secondary infections are extremely common and can make seasonal pruritus become non-seasonal. Bacterial infections are usually caused by staphylococcal organisms, but may also be due to *E coli* or *Pseudomonas*. More cases of methicillin resistant *Staphylococcus* species are being seen. Therefore, if pyoderma lesions are not improving satisfactorily in the first 2-3 weeks with empirical antibiotic therapy, a culture should be done. The length of therapy for a superficial bacterial infection is minimally 3-4 weeks. If there is a deep bacterial infection these should always be cultured and may need antibiotics for 6-8 months. A good ***rule of thumb*** is that the lesions should be completely gone or static for at least 10-14 days before stopping antibiotics. Yeast infections can also cause extreme pruritus. Some of these patients are thought to be having ***seizures*** because of the convulsive movements they make. Most yeast infections respond to 3-4 weeks of anti-fungal therapy. Unfortunately, allergic patients tend to be more susceptible to these infections so chronic weekly therapy may be recommended.

Dawn Logas, DVM, Dip ACVD
MT VMA Sum Conf Procd, 2012

Post hip luxation care

After open or closed reduction of craniodorsal coxofemoral luxation, an Ehmer sling should be placed for 7-14 days post-operatively. This allows for adequate soft tissue healing to occur. Great care must be taken when applying the Ehmer, as an improperly applied wrap can result in severe soft tissue wounds and even necrosis of the foot. The author prefers to use a commercially available vest and Ehmer sling system (Dogleggs.com), as it is easy to apply, breathable, and less likely to cause sores. Caudoventral hip luxations should be managed with hobbles placed at the level of the stifle joint for 7-14 days. The hobbles prevent splaying of the feet and re-luxation of the hip during recovery. These can be created with standard bandaging material and elastic tape. Careful observation of the limb and foot must be made in the Ehmer sling or hobbles, so that any potential problems (sores, slippage) can be identified early. Regardless of the type of sling or hobbles applied, radiographs should be taken after the wrap is applied to ensure that the hip has not luxated during its application. Pain management typically includes opioids (hydromorphone, fentanyl, tramadol) and NSAIDs, unless these are contraindicated. At the time of Ehmer removal, the hip stability must be reassessed. It should be put through a full range of motion and radiographs taken to ensure that the hip remains reduced. If the hip feels stable and is not luxated, an additional 3-4 weeks of exercise restriction is recommended. This includes crate confinement and short leash walks and physiotherapy.

Mary Sarah Bergh, DVM, MS, Dip ACVS
121st SD VMA Conf Procd

CPR, chest compressions

Chest compressions should be initiated immediately upon recognition of cardiopulmonary arrest (CPA), as this will allow earlier initiation of blood flow with only minimally delayed ventilation. The previously recommended sequence A-B-C (Airway-Breathing-Circulation) is therefore altered to C-A-B. Intubation should be performed by the most skilled person present to minimize the time required for task completion. It is then important to tie the ET tube in place and inflate the cuff. Intermittent positive-pressure ventilation can then be provided by use of a manual ventilation bag or with an anesthesia machine. A ventilation rate of 10 breaths/min, with an inspiratory time of 1 second and a peak pressure of 20 cm H_2O, is a reasonable recommendation for most small animal patients. This can be implemented by delivering a normal-sized breath with a short inspiratory time every 5-6 seconds. Chest compressions should not be interrupted to deliver positive-pressure breaths, and the breaths do not have to be synchronized with the compression phase (i.e., compression or decompression of the chest).

Manuel Boller, Dr med vet, MTR, Dip ACVECC et al.
JAVMA, 240:5

Prednisone dosage for pruritus

This author would rather give 20 mg prednisone EOD than 10 mg SID. How much is too much? Aim for a total dose that in 12-month is below the weight (lbs) x 15. For example, an 80 lb Labrador should not exceed 1200 mg/year or sixty 20 mg tablets, or 600 Temaril-P (2 mg pred each). Methylprednisolone is slightly more potent than prednisolone. Multiply prednisone dose by 0.8 to get methylprednisolone dosage (i.e. 4 mg methylprednisolone = 5 mg prednisolone). Reported to have less PU/PD effects than prednisone or prednisolone.

John C. Angus, DVM, Dip ACVD
21,c San Diego Co VMA Conf Procd, Sep 2012

Poor man's Dinamap

In the patient presenting with shock, pulse quality should be assessed by palpating the femoral pulse. Pulse palpation, quality, and duration are a gross estimate of blood pressure and stroke volume (indirectly). If an animal appears healthy, pulses should be strong and synchronous with a palpable pulse for each heartbeat; therefore, one should auscultate the cardiopulmonary system while the femoral pulse quality is being palpated. A palpable femoral pulse is consistent with systolic blood pressure of >60 mm Hg. A palpable dorsal metatarsal pulse is consistent with a systolic blood pressure of >90 mm Hg and can be used as a basic "poor man's Dinamap." This acts as a simple, easily repeatable tool to assess response to volume resuscitation during shock, particularly when blood pressure monitoring is not readily available.

Justine A. Lee, DVM, Dip ACVECC
NAVC Clin Brf, 10:8

Cobalamin supplementation in the cat

Hypocobalaminemia is commonly documented in cats with malabsorptive or infiltrative distal small intestinal mucosal disease and is a predictable finding in cats with exocrine pancreatic insufficiency. Treating hypocobalaminemia reduces the frequency of diarrhea and improves fecal consistency in cats with chronic enteropathies. All cats with serum cobalamin concentrations <300 ng/L should receive parenteral cobalamin supplementation. Cyanocobalamin is the generic preparation used for subcutaneous or intramuscular injection. It usually contains 1,000 µg/ml of cobalamin in solution, making it more convenient and less irritating than B-complex preparations. Cobalamin supplementation is often administered long-term or until resolution of the underlying disease. The dosing regimen for cobalamin follows. 250 µg, every week, from 0-6 weeks; 250 µg every-other-week, from 6-12 weeks; 250 µg every 4 weeks, for 12 or more weeks.

Sally Purcell, DVM and Audrey K. Cook, BVM&S, MRCVS
Vet Med, 105:7

Storm phobias

Behavior Modification for noise sensitivity/noise phobia is also based on desensitization and counterconditioning. Commercially prepared storm or firework CD's are available (Sounds Scary; soundtherapy4pets.co.uk or Through a Dog's Ear Canine Noise Phobia Series; throughadogsear.com) to allow for counterconditioning along a controlled stimulus gradient. Acepromazine has long been used for dogs with storm phobias, but is not recommended. Its action is primarily dopamine blockade to decrease movement so the dog appears quieter, but it offers little anxiolysis and can increase sensitivity to sound. Benzodiazepines, trazodone or clonidine are preferred situational medication because of far greater anxiolysis. Dogs with severe noise phobia, or those who live in parts of the country where storms are frequent and difficult to predict may also benefit from long- term daily administration of an SSRI or a TCA. In the author's experience, SSRIs can sometimes increase sensitivity to noise. This is not common but owners should be made aware that they should return to their veterinarian for different medication should this occur.

Margaret M. Duxbury, DVM, Dip ACVB
121st SD VMA Conf Procd

Oral hypoglycemic agents, cats

The only oral agent that has shown success in diabetic cats is glipizide. It is a sulfonylurea antidiabetic agent that works by increasing insulin release. The long-term success rate is estimated to be approximately 35%; which cats will respond cannot be predicted. The ideal patient for treatment with glipizide is a stable, nonketotic diabetic cat of optimum to obese body weight that has mild clinical signs with no complicating diseases. Patients that are emaciated, dehydrated, debilitated, have concomitant disease, or have recently lost >10% of their body weight are not good candidates. Glipizide can be tried in any cat whose owners refuse to give injections. It can take up to 12-16 weeks to know if glipizide will work. If no response is seen after that time, administration should be stopped and insulin therapy instituted. To this author, this is the big problem with glipizide. It is not known exactly at what point glucose toxicity becomes irreversible, but the sooner diabetic control is obtained, the better. Empirically, taking 12 to 16 weeks trying glipizide is worrying. Other oral hypoglycemic agents do not hold much promise for treatment of diabetes mellitus in cats. Acarbose can potentially be used in combination with insulin depending on the diet. If a high protein diet is not possible in a diabetic cat, feeding a more standard diet and administering acarbose may achieve the same goal. The dose is 12.5-25 mg/cat, twice daily with meals. Side effects are dose-dependent and include flatulence, semiformed stools, or diarrhea.

Ellen N. Behrend, VMD, PhD, Dip ACVIM
Vet Med, 107:7

Selamectin in rabbits

In this study of selamectin on rabbits, it was found that the recommended dose was 20 mg/kg every 7 days to control fleas. No adverse effects were noted. This dose is higher than many clinicians have used.

J.W. Dryden et al.
NAVC Clin Brf, Oct 2012