BLUEGRASS VETERINARY SPECIALISTS

2568 Richmond Road
Lexington, KY 40509
Phone (859)268-7604
Fax (859)335-8635
www.bluegrassveterinaryspecialists.com
internalmedicine@bluegrassveterinaryspecialists.com

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Practice Notes and Updates

Antu Radhakrishnan, DVM, DACVIM

- We now have a new phone and fax number listed above. We are still currently located within Sheabel Animal Medical Center and calls can be received at their number, however we ask that you begin using our new number. If we are already assisting a veterinarian or client, you will have the option to leave a voice message and we will return the call.
- A board-certified veterinary surgeon will begin working with us two days each month. We are pleased to have Dr. Nancy Zimmerman join us on December 11 -12. Please contact us if you have any questions or wish to discuss a potential surgical case.
- Thank you to everyone's well wishes during these past few months. We feel very fortunate to have such compassionate colleagues.
- We are currently pursuing a study to evaluate gastrointestinal disease in cats. The patients will receive standard diagnostics and treatment. The goal of the study is to better classify intestinal disease in cats and improve diagnostic guidelines. Owners will receive some services at a reduced cost for participation.
- Finally, we wish to congratulate Claudia Gering. She worked part-time for us the past 2 years while at UK. She was accepted to Michigan State University's College of Veterinary Medicine and started there this fall.

INTERNAL MEDICINE SERVICES OFFERED

- Laparoscopy including laparoscopic cholecystectomy (elective, non-emergency)
- GI endoscopy including foreign body retrieval, rhinoscopy, cystoscopy, and bronchosopy
- Evaluation, diagnostics, and treatment for various medical ailments including cardiology, neurology, and oncology
- Tracheal and urethral stents
- Consultation (gratis) by phone or e-mail at address above

In this issue:

Which fluid to use? - A practical approach

When faced with a patient that requires fluid therapy, we have numerous choices and sometimes conflicting opinions about which is the best option in certain circumstances. Maintenance fluids contain much less sodium and chloride (0.45% NaCl). Replacement fluids (LRS, Normosol-R, 0.9% NaCl) are isotonic to the blood can be given in large volumes for hypotension or hypovolemic shock and volume expansion. Colloid solutions such as Hetastarch exert oncotic pressure and remain in the vascular space.

In situations of dehydration and hypoperfusion, the fluid choice may be of lesser significance than the simple fact of providing the fluids themselves. When in doubt, it may be best to pick a fluid that is most closely compatible to plasma (LRS, Norm-R). A recent study evaluated fluid choice and its effects on acid-base status and electrolyte balance in cats with urethral obstruction (*J Vet Emerg Crit Care,* Aug 2008). The results found that using a balanced electrolyte solution results in a more rapid return to normal acid-base status with no compromise of electrolyte balance when compared to 0.9% NaCl. The finding is interesting because a prevailing theory is that these cats should receive 0.9% NaCl because of hyperkalemia. The findings disprove the theory and illustrate that it is of greater importance to correct dehydration and support adequate perfusion to vital tissues so that the body may correct abnormalities.

Diabetic ketoacidosis is another emergency medical condition that often results in hyperkalemia. These patients are also often dehydration, hypovolemic and acidotic with severe hyperglycemia. Correction of dehydration is essential for treatment of this condition. While potassium containing fluids may be considered to be contraindicated because of serum hyperkalemia, these patients are actually total body potassium depleted therefore once the dehydration is corrected and insulin started, hypokalemia rapidly develops. The important aspect of treatment in these patients is rehydration and improving tissue perfusion.

When considering which fluid is the best one to use in your patients, consider what are the most important aspects of the case. For dehydration, hypovolemia, and hypoperfusion, replacement fluid is essential. Hypertonic solutions are helpful for drawing fluid into the intravascular space but consider the patients overall status and if they are hypovolemic and dehydrated, replacement fluid will need to complement hypertonic therapy.

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Recent News and Literature

Prognostic indicators in canine parvovirus

A recent study found that the values of band neutrophils, lymphocytes, monocytes, and eosinophils 24 and 48 hours after admission compared to values upon presentation are reliable indicators of prognosis in this disease. While most patients develop a severe leukopenia and neutropenia, survivors had a marked increase in lymphocytes, monocytes, and eosinophils as well as band neutrophils. The findings suggest that performing a good differential analysis of the blood smear will allow clinicians to give pet owners prognostic indicators that will help owners with the decision to continue with treatment. Non-survivors typically maintained severe lymphopenia, monocytopenia, and eosinopenia 24 and 48 hours after admission.

JVIM, Mar/Apr 2008

Differentiation of vaccinated FIV+ cats from naturally infected cats

A new discriminant ELISA is being developed that may help in differentiating naturally infected FIV cats from those that have been vaccinated. Currently available screening tests do not differentiate between the two. The results of a study investigating the new discriminant ELISA are promising but it is not commercially available yet. At this time the best option for trying to differentiate between natural infection vs vaccination is PCR testing. This option is not ideal but is the currently recommended test.

JVIM, Mar/Apr 2008

Vetmedin for the treatment of mitral valve disease in dogs

Vetmedin (pimobendan) has been found to be effective for dilated cardiomyopathy. A recent study looking at 260 dogs evaluated the benefit of this medication in dogs with mitral valve disease. Dogs were divided into two treatment groups: pimobendan and benazepril. The pimobendan group had a significantly longer survival time (267 days vs. 140 days). The study did not evaluate the effect of combined therapy of pimobendan and an ACE inhibitor. Presumably the two should be used together in a patient with mitral valve disease. Furosemide should be introduced with congestive heart failure. Further evaluation will most likely be pursued to determine the effect of combination therapy.

JVIM, Sept/Oct 2008

Feline dysautonomia in the United States

Dysautonomia is a disease characterized by degeneration of the neurons in the autonomic nervous ganglia resulting in failure of the sympathetic and parasympathetic nervous systems. The cause is unknown and prognosis is poor. Canine cases in the US have primarily occurred in Kansas and Missouri while reported feline dysautonomia cases occurred mainly in Europe. A recent paper retrospectively identified nine cases in cats between 2001 and 2006 with a similar geographic distribution to dogs (Kansas and Missouri). Clinical signs included lethargy, anorexia, vomiting, mydriasis with no PLR, prolapse of the nictitans, dry mucous membranes, and bradycardia with no response to atropine. 7 of 9 cats were euthanized due to deterioration of condition within 5 days. Two cats survived for over 11 months.

J Fel Med Surg, April 2008

Meet our staff

Karen Williams—Karen started with BVS from its inception in 2005. She is a graduate of Morehead State University's Veterinary Technology Program. She enjoys many aspects of internal medicine but particularly enjoys working with pet owners to achieve their goals for their pets.

Tasha Wurm—Tasha joined BVS in May 2008 after spending two years as a surgical technician with MedVet in Columbus, OH. She also has experience with exotic animals and aspires to go to veterinary school.

Rebecca Volkert—Rebecca joined BVS in February 2007. She is a graduate of Murray State University's veterinary technology program. Rebecca is working on development of a cancer support group for our clients.

Susan Burke—Susan has been working part-time for BVS since May 2008. She is a pre-veterinary student at the University of Kentucky and just completed her application to veterinary school.