Impact of Survival Benefits of Collaborative Care

CVCA is currently in the peer review process for publication of a study demonstrating the survival benefits of collaborative care in the management of heart failure patients. Furthermore, this study revealed a positive correlation between the improved survival times achieved and the revenue of the primary care veterinarian. More details to come as the study is completed.

Have you visited www.cvcavets.com “For Veterinarians”?

- Online Referral Forms
- Supply Request Forms
  - Client handouts, business cards, magnets and more
- Practice Update Form
- Lunch and Learns
- Payment Options
- CE and Conference Information

Hypertension: Diagnosis and Treatment Options
By: Dr. Jennifer Sidley, DVM, Diplomate, ACVIM (Cardiology)

Hypertension is primarily seen in the geriatric patient and if left untreated can cause serious consequences such as blindness, progressive renal damage, cardiac hypertrophy, aneurysm, seizures, or strokes. It is important to accurately diagnose hypertension and begin treatment before these problems arise.

Unfortunately, the diagnosis is not always straightforward. Hypertension can be over diagnosed if the diagnosis is based on a single blood pressure reading.

cont’d on page 3
Meet Sarah Lehman!
Cardiology Resident

Dr. Sarah Lehman grew up just outside of Philadelphia, PA. She received a Bachelor of Science in Biology with a minor in Anthropology in 2008, graduating Cum Laude from the College of William and Mary. Dr. Lehman pursued her veterinary degree at the University of Pennsylvania where she graduated in 2012. During veterinary school she completed research investigating the genetics of PK and PFK deficiency in dogs. These findings were presented at the Merck-Merial NIH Veterinary Scholar’s Symposium in 2011 and have also been published in the Journal of Veterinary Internal Medicine as well as the journal Molecular and Cellular Probes. Throughout school she was also active in many groups including the ECC club, equine club, shelter medicine club and in fundraising through the SCAVMA Auction.

Dr. Lehman completed a one year rotating internship at the Hope Advanced Veterinary Center in Vienna, VA before returning to Philadelphia for a one year specialty internship in Emergency and Critical Care at the University of Pennsylvania School of Veterinary Medicine.

Her primary interests include congenital cardiac diseases, management of congestive heart failure, management of arrhythmias, and interventional cardiology. Dr. Lehman enjoys spending time with family and friends, practicing photography and guitar, and traveling in her free time. She looks forward to getting back to horseback riding one day, and loves the company of her two mixed-breed dogs, Ayden and Charlie.

Meet Sara Bordelon, CVCA’s newest cardiologist!

Dr. Sara Beth Bordelon’s first official day is June 1, 2015 and we are very excited to welcome her to our office at VCA SouthPaws Veterinary Specialist and Emergency Center in Fairfax, VA.

Sara obtained her DVM degree from Louisiana State University College of Veterinary Medicine in 2005. She completed a one year rotating internship prior to beginning her Cardiology residency. She completed her Cardiology residency at Washington State University and became a Diplomate of the American College of Veterinary Medicine (Cardiology) in July 2009. Dr. Bordelon spent the last three years as a clinical professor of Cardiology at Auburn University College of Veterinary Medicine. She is active in the American College of Veterinary Medicine and has served on the residency training committee and served on and chaired the credentials committee.

Dr. Bordelon enjoys all aspects of cardiovascular disease, but has a special interest in management of arrhythmias, diagnosis and management of congenital cardiac disease and pulmonary arterial hypertension. In her free time she enjoys reading, running and spending time with her husband, son and cat. She is excited about joining the CVCA team and exploring all that Virginia has to offer.
On the other hand, if the index of suspicion for the disease is not high or patients are not tested, the disease can be missed. Also, obtaining accurate blood pressure readings can be difficult due to the stress level of some patients, variations in body conformation and size, and technical aspects of blood pressure measurement.

Tips for increasing the accuracy of blood pressure testing

1. Make sure team members are well trained in blood pressure testing.
2. Minimize stress for the patient by having the owner present, allowing a few minutes to acclimatize, dimming the lights, and minimizing noise.
3. Make sure the cuff width is 40% of the limb circumference in dogs and 30-40% in cats. Too large will artificially lower the reading and too small will increase it.
4. Cuff should be placed on cylindrical appendages. Certain breeds, such as Dachshunds and Basset Hounds, have quickly tapering limbs that do not occlude evenly and tail readings may be more accurate for this conformation.
5. The Ultrasonic Doppler is the most accurate method for small dogs and cats.
6. Readings should be consistent and reproducible. If an abnormal reading is obtained, adjust the cuff to make sure a similar reading is obtained again, then confirm a similar reading on another site.
7. Record where the blood pressure was taken, the position of the animal, the cuff size, and state of the animal for future comparison.

Who’s at risk for hypertension?

Because hypertension is most common in older patients, we recommend routine screening in all patients over 10 years of age.

Most cases of hypertension are secondary to another disease. Renal disease, diabetes, Cushing’s, thyrotoxicity, pheochromocytoma, and hypothyroidism can all increase the risk for hypertension. Patients with these conditions should have their blood pressure routinely measured even if they are under 10 year old.

If no concurrent disease is present, then the hypertension is considered primary or idiopathic. Since primary hypertension is much less common, it’s important to make sure that high readings are persistent and reproducible.

Interpreting blood pressure results

According to the ACVIM consensus statement, a persistently elevated systolic blood pressure above 160 mmHg moderately increases the risk of end organ damage. A reading above 180 mmHg severely increases that risk and multiple medications may be required.
If an elevated blood pressure is detected in a patient, looking for evidence of concurrent disease or evidence of end organ damage may help confirm the diagnosis. A careful physical exam should be performed paying close attention to evidence of endocrinopathy (poor hair coat, organomegaly, rat tail) as well as vascular dilation, petechia and/or retinal detachments noted on a fundic exam. Evaluation of blood work including CBC, chemistry, T4 and urinalysis may also elucidate an underlying cause.

**Treatment of hypertension**
If underlying diseases such as hyperthyroidism or Cushing’s disease are found, treating these may be sufficient. With more severe hypertension, antihypertensive medication will likely be required. Medications that can potentially cause or exacerbate hypertension, such as phenylpropanolamine, steroids, or theophylline, should be stopped or decreased, if possible.

Amlodipine is the treatment of choice in the cat due to its efficacy and duration of action. The initial dosage is ¼ of a 2.5 mg tab once a day. Some patients require gradual increases including up to ½ tab twice a day if needed. The decline expected can be in the 40 mmHg range but responses vary. Both ACE inhibitors and Amlodipine (0.1-0.25 mg/kg q 24 h) are useful in the dog. Although the decrease in blood pressure with enalapril may be mild, it has protective effects on the kidneys by decreasing intraglomerular hypertension. With hyperthyroidism there is excessive sympathetic stimulation and beta blockers are helpful. Depending on the response to initial therapy and concurrent conditions, multiple medications may be required.

The majority of cases of hypertension can be treated on an outpatient basis with oral medications. Animals with severe neurological manifestations may require more aggressive in-hospital treatment, including nitroprusside or hydralazine, but this is rare.

The goal of treatment is to reduce the blood pressure and minimize the danger of end organ damage. Blood pressure should be checked weekly until controlled, then every 3 months thereafter.

**Key Points to remember**

1. Blood pressure screening is recommended in older patients, patients with diseases that increase the risk for hypertension, and patients with symptoms consistent with end organ damage.
2. The decision to treat should be based on reliable, repeatable blood pressure readings.
3. Treatment should be aimed at addressing any underlying diseases and trying to maintain a systolic blood pressure less than 160 mmHg.
The Murmur
Exceptional Cardiac Care for Pets and their families since 1987.

Why CVCA

CVCA Cardiac Care for Pets has been the leading choice of veterinary cardiology since 1987. We see over 13,000 patients per year, more than any other veterinary cardiology practice worldwide.

- Largest Practice of Board Certified Veterinary Cardiologists
- Partnership for Optimal Outcome and Care: Patients with congestive heart failure live 75% longer when co-managed in person by a board certified veterinary cardiologist and primary care veterinarians.
- 24/7 Availability by Phone: Our board certified veterinary cardiologists are available by phone 24 hours a day, 7 days a week to you and your clients for questions or emergencies.
- Collaboration with Primary Care Veterinarian: CVCA is committed to ensuring ongoing communication with you; we are here to support you for all of your patients.
- Availability for Same Day Urgent Cases. Need help? Just call!
- Exceptional, Compassionate Service: Over 99% of our clients would recommend us to a friend or family member.

Diagnostics and Examinations: Owners accompany pet for echocardiogram so board certified cardiologists can:

- Discuss exam in detail
- Ensure accuracy in imaging and measurements
- Provide immediate diagnosis
- Provide ample time and opportunity to discuss treatment options
- Exceptional Value: Initial consultations include:

  - Blood Pressure
  - Echocardiogram
  - Discussion and follow up
  - Unlimited time for questions
  - Constant access to cardiologist, 24/7 for phone consultations
  - Full and accurate cardiac workup ensures that your clients get the most comprehensive and cost effective care.

Benefits of seeing a Board Certified Veterinary Cardiologist vs. Telemedicine

- Echocardiogram performed by board certified veterinary cardiologist
- Ensures correct technique and interpretation for the right diagnosis and treatment recommendations
- Complete cardiac physical, review and interpretation of medical history including radiographs and lab work
2 New Locations!

**Fairfax, VA (Now Open!)**
CVCA in SouthPaws Veterinary Specialists & Emergency Center
8500 Arlington Blvd.
Fairfax, VA 22031
Phone: 571-348-3888
Fax: 571-395-8434
Email: cvcafairfax@cvcavets.com

**Rockville, MD (Now Open—New Location!)**
CVCA in Hope Advanced Veterinary Center
1 Taft Court.
Rockville, MD 20850
Phone: 301-984-5791
Fax: 301-770-7461
Email: cvcarockville@cvcavets.com

Locations Serving PA!

**Frederick, MD**
CVCA in CARE Veterinary Center
1080 West Patrick Street
Frederick, MD 21703
Phone: 240-457-4387
Fax: 703-669-9312
Email: cvcafrederick@cvcavets.com

**Towson, MD**
CVCA Pet E.R.
1209 Cromwell Bridge Road
Towson, MD 21286
Phone: 410-339-3461
Fax: 410-828-5315
Email: cvcatowson@cvcavets.com

Education Corner

**CE EVENTS & CONFERENCES**
Visit [www.cvcavets.com/educational-events.asp](http://www.cvcavets.com/educational-events.asp) to learn where CVCA will be next!

**LUNCH AND LEARN**
Have you checked out the list of Lunch and Learns we offer? Visit [www.cvcavets.com/lunch-and-learn.asp](http://www.cvcavets.com/lunch-and-learn.asp).
We are in the process of becoming RACE certified! More information to come!

Social Media

- **FACEBOOK**
  Have you liked us on Facebook?
  www.facebook.com/CVCAVETS
- **INSTAGRAM — COMING SOON!**

Payment Flexibility

Did you know we accept Care Credit, offer interest free payment plans, accept all major credit cards, checks and cash?