VRCC
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VRCC®
VETERINARY SPECIALTY & EMERGENCY HOSPITAL

SPRING 2015 NEWSLETTER

ARE YOU READY FOR SPRING?

Spring is here at VRCC, and we celebrate the changing of the seasons with this brand new newsletter packed full of information about our neurology, cardiology and surgery teams as well as upcoming events and news.

Our surgery team shares their history and information about their board certified anesthesiologists and highly trained team of technicians, assistants and coordinators.

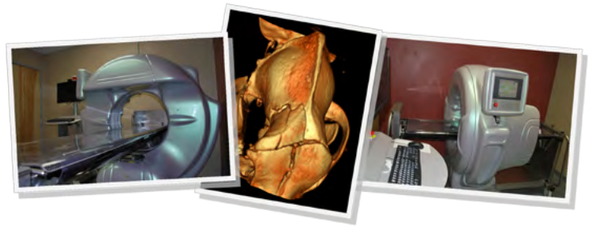
Check out our news and events section that includes information about our 4th annual Battle of the Vet Hospital Stars later this year, and a few clinical trials going on with our Dermatology and Oncology departments.

You'll learn more about our cardiology lead technician, Patrick Gibson, and how he came to work at VRCC after living in several countries abroad. We hope you'll enjoy this edition's case study on a chronic oral anticonvulsant in the treatement of cluster seizures, written by Dr. Steve Lane with our Neurology department.

Best wishes,
Your VRCC Team

NEW CT SCANNER!

VRCC is excited to announce that we now have full CT capabilities! A brand new CT unit was installed in our hospital at the end of 2014. This technology allows our specialists to use advanced imaging to diagnose and treat an array of conditions and illnesses. The Vimago CT Scanner is



a robotic, high definition, computed tomography-fluoroscopy-digital radiography platform that is mobile but capable of imaging an entire patient in a single series, and can fit even extremely large dogs. The system operates with the speed equivalent to a 4-slice conventional CT. VRCC is proud to offer this CT machine and our services at a more cost effective rate for pet owners than traditional MRI or CT scans. At this time, we are not offering CT scans on an outpatient basis, but will work along side you and your client to ensure your patients receive the most comprehensive care.

SPECIALTY HIGHLIGHT: SURGERY

We are the leading veterinary surgery team in the Rocky Mountain region. Drs. Brian Van Vechten and Chad Devitt consult and provide complete surgical needs including orthopedic, oncologic, thoracic, reconstructive surgeries, and medical management, including PRP and stem cell therapies. Dr. Van Vechten joined our surgery team in June 1995 and Dr. Devitt joined us in 1999. They both now serve as the medical directors for the VRCC surgery department.

Specialty Highlight . . . Continues on page 2

STAFF HIGHLIGHT: CARDIOLOGY

Patrick Gibson, Lead Certified Veterinary Technician

Patrick is the lead technician for the cardiology department at VRCC and has been in the veterinary field now for 26 years. He graduated from Bel-Rea in 1994 and has had the opportunity to live and travel all over the world. He was born in Jordan and lived there for a number of years before moving to Tanzania, Kenya and Saudi Arabia. He has also traveled around Europe, Mali, Iceland, Thailand, India, Pakistan, and Nepal.

Patrick has worked in both large animal and small animal veterinary practices and has also participated in numerous research studies for the Division of Wildlife in both Colorado and Vermont.

After living in Bermuda for six and a half years, Patrick relocated to Colorado where he joined the cardiology team at VRCC in 2009.

When asked how and why he first got involved with veterinary medicine he said, "like most people in this field, I'd always felt a special bond with animals at an early age. I had a very special German Shepherd named "Ziyad" after high school that got out of the yard one night and was hit by a car. I lived out in the country with no veterinary hospital nearby. I remember feeling so helpless as I sat with him on the side of the road in the dark because I didn't know how to help him. He passed away in my arms. Looking back, that was the turning point where I began to consider veterinary medicine."

His extensive knowledge of cardiac procedures and cardio pathophysiology, combined with his compassion for animals and his high level of patient care, makes him a favorite amongst doctors, clients and technicians alike.

Patrick enjoys the Colorado outdoors by hiking, mountain biking and snowboarding. He is still a passionate international traveler, enjoys scuba diving and is an avid pool player in his spare time.

When Patrick has time to relax and spend time at home he is kept company by his dog Charlie.

Our surgery team works closely with the other specialists at VRCC to provide the most comprehensive treatment possible. VRCC Surgery prides itself in offering advanced technology and unparalleled surgical expertise. We have minimally invasive surgical equipment, and consistently strive to perform at a level of surgery comparable to what you would expect in human medicine. We also provide emergency surgery support after hours, and on weekends for our Emergency and Internal Medicine departments. In June, we will be expanding our hours to offer appointment times on Saturdays.

We are proud to be a part of the VRCC and feel it is an honor to work with such a dedicated and talented team of professionals to provide the highest possible care. Along with our talented surgeons, our staff of 2 anesthesiologists, 3 managers, and 10 amazing support staff technicians are highly trained in the fields of surgery, pain management, critical patient care and recovery, and work as a close-knit team. Our team is cross-trained in many areas to allow full support to our patients, clients and their family veterinarians.

We pride ourselves in a remarkable client experience in and out of the building. Our surgeons make themselves available to you, and your clients, by phone or email, virtually 24/7. They welcome questions and will consult not only during work hours, but also from places like the ski slope, the golf course, the single-track trail during a water break, or the seat of their kayak! We make communication and exceptional service a fundamental necessity!

VRCC Surgery department's direct phone number is (303) 874-2073. Please don't hesitate to call our team if you have questions about a current surgery patient or need a consult on a new case.

CENTER NEWS & EVENTS

- Mark your calendars! Sunday, September 13th, 2015 is the 4th Annual Battle of the Vet Hospital Stars! Registration opens in May, so keep a look out to be a part of the Colorado veterinary community's largest FUNdraising, team-building and networking event.
- Our ophthalmology department is proud to once again be participating in free service dog eye exams during the 2015 ACVO National Service Animal Exam event taking place throughout the month of May.

- The new MRI and Neurology/Neurosurgery building located across the street from VRCC is nearly complete! The new building will be opening early this summer.
- Congratulations to Craig Cousins, VRCC Purchasing and Facilities Manager, on receiving dual Bachelor's degrees in Marketing and Management!
- Furry Scurry is on Saturday May 2nd at Wash Park in Denver, and we are proud to be a sponsor for our 14th year! Stop by to see us, and step into our photo booth with your pet!
- Keep an eye out for our next CE event to take place in October. Details coming soon.
- VRCC's surgery and orthopedics department will have a surgeon and/or radiologist read orthopedic x-rays free of charge if emailed to surgery@vrcc.com.
- VRCC's Neurology department now has 24/7 Specialized Overnight Patient Care by our very own dedicated neurology technicians. Our skilled technical team has been expanded to cover all hours of the day and nights, with round the clock personalized patient care.
- Check out the VRCC blog, "Around The Water Bowl" at www.vrcc.com/blog updated with patient stories, case studies and articles.
- VRCC Dermatology is participating in a funded clinical trial for eligible dots with atopic dermatitis. Contact our Dermatology department at 303.874.2078.

CASE STUDY: NEUROLOGY

Levetiracetam (Keppra). The "Cluster Buster." A chronic oral anticonvulsant with a promise for "Pulse Oral Therapy" in the treatement of cluster seizures

By: Dr. Stephen Lane, DVM, Diplomate ACVIM Specialty of Neurology / Neurosurgery

The management of chronic recurrent seizures in companion animals can often present a medical challenge to veterinarians and an economic and emotional obstacle for loving owners. With the availability of new anticonvulsants, greater latitude exists for anticonvulsant choice and success in the chronic management of companion animal seizures. With that said, the body of knowledge regarding the safety, efficacy and drug interactions with many of these newer agents remains in its infancy. Even less is known regarding their efficacy during cluster seizure events.

The use of "newer generation" anticonvulsants has allowed for greater control of companion animal recurrent seizures. As with all "off label" medications, unapproved for use in animals by the FDA, use should be based upon individual case selection and with the owner's fully aware of the potential side effects and long-term uncertainty regarding safety. While it appears that these newer generation anticonvulsants are safe as chronic oral anticonvulsants, their use is often limited by their cost ($200-300 per month for a 40 kg dog). Of greater economic importance to owners of refractory cluster seizure patients, is the cost of emergency parenteral anti-epileptic treatment. Maintaining the care of these patients at home could make the difference in an owner's decision to euthanize their pet due to recurring emotional and economic expense.

Levetiracetam is a pyrrolidone-derivative anticonvulsant approved by the FDA for use in partial seizures in humans. The anticonvulsant mechanism of action is not well understood. Levetiracetam may act by preventing hypersynchronization of epileptiform burst firing and propagation of seizure activity. These actions act to raise the seizure threshold, suppress paroxysmal depolarization shifts and the spread from the seizure focus.

Levetiracetam appears to be safe and effective in the treatment of companion animal seizures.

> "The leading cause of death in recurrent seizure patients remains euthanasia."

Absorption following oral administration is felt to be rapid and complete. Elimination half-life is 4-5 hours in the dog. Plasma protein binding is limited at less than 10%. Levetiracetam undergoes minimal hepatic metabolism. Levetiracetam is excreted 65-75% unchanged in the urine through glomerular filtration and active tubular secretion. Clearance can be significantly reduced in patients with impaired renal function. Levetiracetam is relatively safe. Dogs given 1200 mg/kg/day developed salivation and vomition.

The management of recurrent cluster seizure patients remains a medical and economic challenge in Veterinary Medicine. Despite aggressive anticonvulsant therapy, cluster seizures can remain the pattern of the seizure patient. Failure to stop clustering events results in a costly, emotional and time-consuming visit to a local emergency facility. This only adds to the stress of owning and loving an epileptic pet.

The use of per-rectal Diazepam therapy (1 mg/kg if not receiving Phenobarbital therapy, and 2 mg/kg if receiving Phenobarbital therapy) or Clonazepam (0.2-0.5 mg/kg q8h) has been used with variable success in cessating continued cluster seizure activity within the home setting. Intranasal Midazolam(INMDZ) gel at 1 mg/kg appears to offer greater seizure control than per-rectal Diazepam. The mode of administration is also easier.

Keppra (Levetiracetam) is an effective as an oral, ***"pulse anti-epileptic"*** to control further seizures after the initial administration of INMDZ. Based upon the pharmacokinetics of Levetiracetam, therapeutic plasma concentrations are obtained within 1-3 hours following oral administration. ***Levetiracetam should be administered as soon as the pet can swallow, following the first noted seizure, and continued every 8h for a 24-hour seizure free period. A dosage of 20 mg/kg q8h is recommended.***

In the short time we have begun utilizing this protocol in refractory, cluster seizure patients, we have seen a reduction in the number, frequency, and severity of seizures. We have also noted that these patients recover quicker following the cluster episode. The greatest benefit has been a reduction in the visits to an emergency facility for the owners. This economic benefit saves companion animal lives.

New VRCC Oncology Clinical Trials - Currently Enrolling!

Partially Funded K9 Osteosarcoma Clinical Trial:

Dogs with a confirmed diagnosis of osteosarcoma that have undergone surgical resection of the primary tumor (appendicular, axial) and have lung metastasis that is visible on chest x-rays are eligible. This is a partially funded study, chest x-rays, Palladia and Losartan are included free of charge until progressive disease is noted, up to 1 year. Owners are responsible for costs beyond that (recheck exams, blood and urine test and ancillary medications).

Visits start at every 2 weeks for the first month, then are every 4 weeks until progressive disease or up to 1 year.

Limited Availability of a Novel Monoclonal Antibody (anti-CD52) for Treatment of K9 T-Cell Lymphoma:

Dogs with a biopsy and flow cytometry confirmation of an intermediate or high grade, naive T-cell lymphoma, stage II or higher are eligible. Patient needs to have at least 1 peripheral lymph node >2cm and some staging tests may be required prior to entry (CBC, biochemical profile, urinalysis, lymph node cytology, chest x-rays and abdominal ultrasound) which will be performed at the owner's expense. Patients must be feeling well and in overall good health with adequate organ function (determine by blood work) to participate in this clinical trial. The anti-CD52 antibody is available for a limited time at a reduced cost to increase the clinical experience of treatment in which complete or partial remission has been achieved with chemotherapy and/or prednisone. Visits are twice weekly for the first 4 weeks, then every 2 weeks for an additional 4 treatments.

Please call us at 303-874-2054 for more information or to set up an appointment.