

# Central Connection

Your Connection to Valley Central - WINTER 2012



## Leaders in Specialty Care

Dear Colleagues:

Welcome to our Winter 2012 newsletter. In this issue, we have included articles written by Dr. Salvador Galindo, Dr. Johnathan Goodwin, Sylvia Havlish, and Kristine Rigler, CVT.

Our commitment is to keep you and our clients updated on medical topics and new services offered at Valley Central Veterinary Referral Center. The doctors and staff at Valley Central Veterinary Referral Center want to thank you for your sustained and continued support. Our continued goal is to provide the highest standard of veterinary care for your clients. We understand that our success as a referral hospital is a result of your confidence in the veterinary service we provide for your clients and patients. Please do not hesitate to contact any doctor or staff member with questions or concerns regarding any aspect of our veterinary hospital services.

Allyson Tolliver, Hospital Administrator

### IN THIS ISSUE:

- **SURGERY**

Understanding Hip Dysplasia: clinical signs, diagnosis and treatment

- **CARDIOLOGY**

Not all seizures are equal

- **NURSES TIP**

Laryngeal Paralysis



### VCVRC

210 Fullerton Avenue  
Whitehall, PA 18052  
Phone 610-435-1553  
Fax 610-435-6378  
www.vcvrc.com

### Updates From VCVRC:

#### *Farewell wishes from Dr. Ezra Steinberg.*

The reason behind the move is based solely on location and the need to be closer to my (and my fiancé's) family. I have taken a job in Westchester, NY at Katonah-Bedford Veterinary Center. The decision was not easy and I know that I will certainly miss working with such a talented and dedicated staff as well as such an amazing group of referring veterinarians. We have done a lot of great work here in the past two years and I am excited to follow the continued growth of the hospital. With Drs. Hodges and Galindo performing joint replacements and the minimally invasive equipment being put to good use, I know that VCVRC will continue to offer all aspects of specialized care to the Lehigh Valley. I would like to thank you for all of your support since I have been here. We have shared many challenging and unique cases, most of which I will never forget. I am so grateful to have had the opportunity to get to know you and hope that our paths cross again; it is such a small world.

*We wish Susan Bulanda* our behaviorist best of luck in her move to Maryland. We also wish her husband best of luck in his job transfer. It has been a joy to have worked with Susan. We continue to offer our Behavioral Services and are happy to

announce that Robin Stephan has filled the place of Susan. She sees patients every other Monday.

*We are pleased to announce that Kristine Rigler*, our surgical nurse, has been selected as the 2012 Veterinary Technician of the Year Award recipient. This award honors a certified veterinary technician for his or her outstanding achievement. Kris is an active PVT member, has demonstrated continued efforts in the advancement of knowledge and expertise in veterinary technology, and is a committed advocate for the profession. Congratulations again on this prestigious award Kris. We are proud to have such a dedicated staff member as part of our surgical team.

We want to extend a special thank you to all of the veterinarians who have referred clients to our pet loss support group. This service has been a welcome addition for people who are having a difficult time working through the grieving process. More importantly, thank you for helping us reach out and offer help to anyone who needs it during such a difficult time. Please help us spread the word about this free service to your clients. The pet loss support group led by our grief counselor Sylvia Havlish, meets at VCVRC on the 2nd Monday of every month at 6:00 PM. Please tell clients to call and make a reservation.



## SURGERY

Salvador Galindo, D.V.M. (Practice Limited to Surgery)

### **Understanding Hip Dysplasia: clinical signs, diagnosis and treatment**

Canine hip dysplasia can be debilitating in various breeds of dogs. Hip dysplasia is a developmental defect that occurs commonly in dogs and rarely in cats. It is characterized by hip joint laxity early in life leading to joint degeneration. It occurs most commonly in rapidly growing breeds of dogs, usually affecting both hips joints. Genetic and environmental factors that lead to laxity of immature hip joints are some of the causes that lead to hip dysplasia. The joint laxity leads to subluxation and poor congruence between the femoral head and the acetabulum, resulting in abnormal forces across the joint that interfere with normal development and cause overload of the articular cartilage. Degenerations of the joint, like capsular fibrosis, articular erosion, subchondral bone sclerosis and osteophytosis are seen at this point. Environmental factors that affect the development and progression of canine hip dysplasia can be summarized by rapid weight gain in growing animals, excessive caloric intake, reduced pelvic muscle mass, and a mismatch between skeletal and muscular developments.

The most common clinical signs in dogs with hip dysplasia are decreased physical activity, difficulty rising, reluctance to run or climb stairs, intermittent hind limb lameness, “bunny hopping”, swaying gait, narrow stance, atrophy of thigh muscles with hypertrophy of shoulder muscles and crepitus with decreased hip joint motion. Hip dysplasia can be diagnosed tentatively, based on the aforementioned clinical signs, history and a routine physical examination; more specific test includes but is not limited to, positive Ortolani’s sign (dorsal

coxofemoral luxation followed by abduction of the femur) or Barden’s test (elevation of the femoral shaft that produces lateral displacement of the greater trochanter). Care should be taken on hips that are affected chronically, since the periarticular fibrosis may not allow for any hip looseness. Definitive diagnosis requires radiographic identification of hip laxity or secondary morphometric and degenerative changes within the joint. Changes that are commonly seen with radiographs are incongruity of the coxofemoral head with the acetabulum; joint subluxation. Degenerative joint disease; flattening and thickening of the femoral head, shallow acetabulum, irregular acetabular margin sometimes with enthesiophyte formation around the joint margins, subchondral bone sclerosis and increased density of periarticular soft tissues. Usually one hip might appear severely more affected than the other. We recommend that animals undergo a hip-screening test, either by the Orthopedic foundation for Animals (OFA) or PennHip registry. At Valley Central we rely and are registered to perform PennHip. We require that animals be fasted the night before since they will undergo light sedation. Once a diagnosis has been made, treatment for the affected animal should be considered. Depending on the level of DJD seen there are various surgical techniques available, Triple Pelvic Osteotomy (TPO), Double Pelvic osteotomy (DPO) or premature closure of the pubic symphysis (Juvenile Pubic Symphysiodesis) in immature dog with joint laxity and NO degenerative disease. For immature dogs with joint laxity and DJD;



## SURGERY

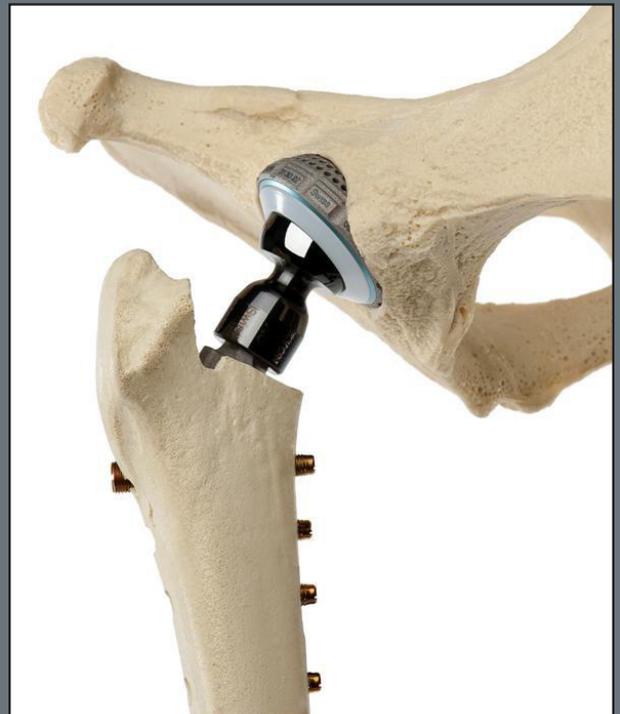
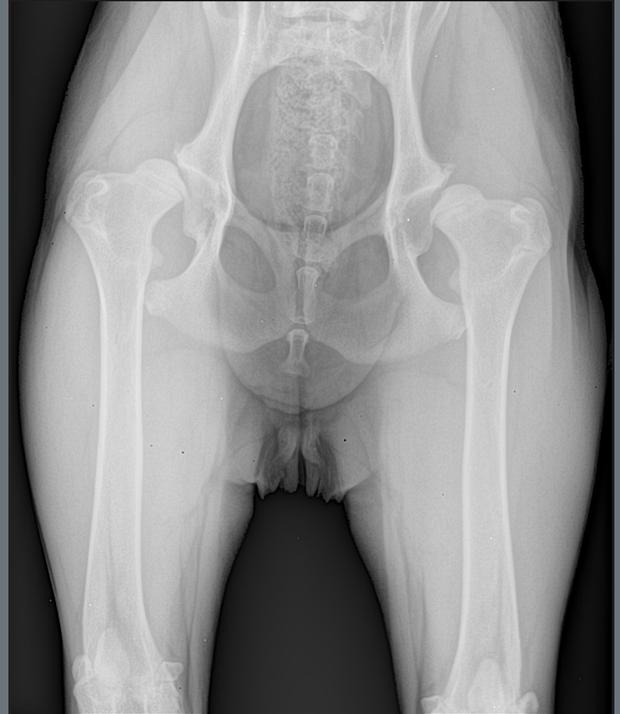
Salvador Galindo, D.V.M. (Practice Limited to Surgery)

### Understanding Hip Dysplasia: clinical signs, diagnosis and treatment

medical management (usually unsuccessful) or femoral head and neck excision (FHNE- formerly or also known as “FHO”) are some options available. We treat mature dogs diagnosed with DJD with Total Hip Arthroplasty.

Total hip arthroplasty is frequently used for successful treatment of coxofemoral degenerative joint disease caused by hip dysplasia in clinically affected dogs.

A few types of hip prosthesis have been available such as, cemented and uncemented hip (KYON) prosthesis. Previously reported complications with cement fixation of the component of total hip prosthesis include loosening at the cement-bone and cement-implant interfaces. Uncemented components (cups and stem) are designed to eliminate complications associated with polymethylmethacrylate fixation. By using a press fit at surgery of the acetabular component and locking stem and eventually bone ingrowth for long-term stability. Drs S. Galindo and C. Hodges are certified to perform the Zurich Cementless Total Hip Prosthesis (ZCTHP- Kyon Inc). The ZCTHP is composed of an acetabular component which is comprised of an ultra high molecular weight polyethylene insert within a plasma coated, perforated titanium shell and is available in different sizes. The head and neck are diamond coated. The locking stem is also plasma coated, once inserted into the femoral shaft this can be firmly adhered to the medial aspect of the femoral bone until further osteo-integration occurs. Considering the method utilized to treat coxofemoral DJD, some factors need to be considered; the dog’s age, size, activity, degree of laxity and OA, quality and depth of the acetabulum and the medical and surgical costs.





## CARDIOLOGY

Jonathan C. Goodwin, DVM, MS, DACVIM

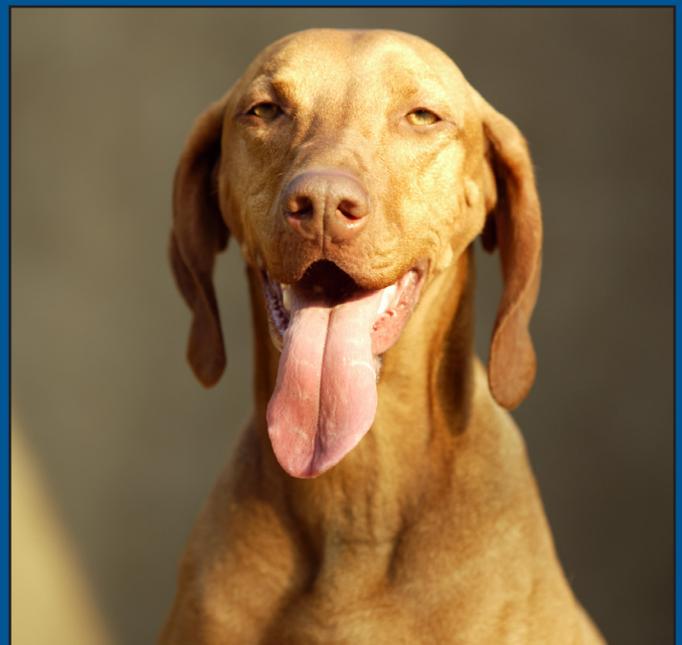
### Not All Seizures are Created Equal

Seeing a family member have a seizure can be a terrifying experience. Without warning, your four legged friend may fall on their side trembling. They may urinate, lose control of their bowels, or even let out a cry as they throw their head back and stretch their neck into an awkward position. When they are taken into the hospital, most owners will tell their family veterinarians that their pet had a seizure. The parents do not realize that the event could have also been caused by heart disease. For many people this brings up more questions. Everyone knows that seizures come from brain disease. How can the heart cause such a thing? Here is how it happens. Seizures occur when brain cells become abnormally active in sending signals throughout brain tissue. This occurs when the brain cells get damaged. When cells in the body do not get the oxygen they need, they become damaged. The job of the heart is to supply oxygen rich blood to all the tissues in the body. If the heart is unable to supply the cells in the brain with their oxygen needs, then these brain cells may get damaged and become abnormally active causing seizure-like activity. Sometimes, these episodes are referred to as syncope.

The best assistance any owner can give to their veterinarian is a good history. There are some distinct differences between syncopal episodes and true seizures that are easy to recognize. Remembering these subtle differences can help you determine the appropriate tests to run and the best order in which to run them. First, if the pet has episodes that seem to happen predictably after exercise, excitement, going outside to the bathroom, or on walks, heart disease should be strongly considered. Second, seizure-like activity caused by the heart tends to occur suddenly and ends relatively faster than true seizure activity. An animal that collapses due to heart disease will typically fully recover and be back to their normal self within 20-30 minutes of the event. Animals with seizures may take hours to days to return to normal. If by the time the pet gets to the vet,

he or she is back to normal, then heart disease should be considered as a potential cause of the episode.

The heart diseases most often responsible for seizure-like activity episodes have to do with abnormal heart rates or rhythms. The best way to assess for a heart rhythm problem would be to place a Holter monitor on them in order to record every heart beat and rhythm for a 24 hour period. Weak hearts, however, can also demonstrate some of these same signs. Keeping this in mind, you may want to do an electrocardiogram (EKG) or chest radiographs (x-rays) to see if either abnormality is present. You may also recommend seeing a veterinary cardiologist that deals with these problems on a regular basis. So in the mean time stay watchful and vigilant. The better the history, the better chance there is of finding an answer to your patient's problem.





## NURSES TIP

Kristine Rigler, CVT

# Laryngeal Paralysis

As temperatures rise and our patients become more active outdoors, the incidence of dogs presenting with upper airway obstruction secondary to laryngeal paralysis increases.

Laryngeal paralysis is the failure of the arytenoid cartilages and vocal folds to abduct normally during inspiration. Paralysis can be unilateral or bilateral and is commonly an acquired, progressive disorder associated with a polyneuropathy. Large breed male dogs >9 years of age are most frequently affected.

Clinical signs include a change in bark, gagging or coughing during or post eating/drinking, exercise intolerance and inspiratory stridor. Progression of signs is often slow; months to years may pass before an animal develops severe respiratory distress. Patients that are asymptomatic at rest or have mild clinical signs may be managed conservatively by decreasing stress and excitement, avoiding exposure to high and humid temperatures and weight loss as needed. As paralysis of the laryngeal muscles progresses bilaterally, symptoms worsen and may lead to severe dyspnea, cyanosis and syncope. Many dogs will require palliative surgical intervention as clinical signs become more severe or as quality of life is affected.

Dogs presenting with severe dyspnea should be supplemented with flow-by oxygen to help alleviate hypoxia. An intravenous catheter should be placed and sedation administered as needed for anxiety [acepromazine (0.005mg/kg-0.02mg/kg IV) and butorphanol (0.2-0.4mg/kg IV)]. A rectal temperature should be obtained to determine if hyperthermia is present since a dog's primary means of heat loss is evaporation while panting. Hyperthermia should be managed with cooled intravenous fluids and cold compresses and discontinued once temperatures reach 103 F. Once stable, thoracic radiographs should be obtained to rule out other potential causes of dyspnea and exercise intolerance. Lung fields should be assessed for evidence of aspiration pneumonia and non-cardiogenic pulmonary edema. Megaesophagus may also be present secondary to a polyneuropathy and should be diagnosed prior to surgical intervention. Animals with megaesophagus or motility disorders have an increased risk for aspiration pneumonia postoperatively. Masses or trauma affecting the upper airway should also be ruled out. Additionally, thyroid function should be evaluated to rule out hypothyroidism. The association of hypothyroidism with laryngeal paralysis is unclear and medical treatment will unlikely restore laryngeal nerve function.

Laryngeal paralysis is most commonly diagnosed with transoral laryngoscopy under a light plane of anesthesia. Intravenous propofol is administered to the point at which the mouth can be opened but laryngeal reflex is still present. During the

exam, the motion of the arytenoid cartilage is observed during inspiration with the patient in sternal recumbency with the head elevated to a normal carrying position. Intravenous dopram may be used to stimulate the central respiratory center and to improve the laryngeal exam. Laryngeal motion should be correlated with the phase of respiration and it is helpful to have an assistant call out when each inspiration/expiration occurs to avoid a misdiagnosis caused by paradoxical motion. Corticosteroids may be indicated if laryngeal inflammation and edema is present.

While the respiratory distress caused secondary to laryngeal paralysis is an emergent situation and needs to be addressed immediately, once sedated, cooled and stabilized, animals with laryngeal paralysis can often be effectively managed medically until surgical intervention can take place. Extreme cases may require endotracheal intubation or a temporary tracheostomy.

Surgical intervention is available to enlarge the size of the rima glottidis and allow an increase in airflow during inspiration. Unilateral arytenoid cartilage lateralization (UAL) is the most commonly performed procedure for laryngeal paralysis. With this technique, a non-absorbable suture material is placed between the arytenoid and cricoid (or thyroid) cartilages to prevent inward motion of the arytenoid cartilage during inspiration. In some cases, a soft palate resection may also be indicated. Bilateral thyroarytenoid cartilage lateralization and vocal fold excision is another surgical option which has very similar results.

Postoperative complications are minimized by providing owners with detailed instructions. Owners should be educated that arytenoid lateralization is only a palliative treatment and is not a cure and that aspiration pneumonia may occur shortly after or at any time for the remainder of the dog's life. Altering food and water intake is critical in minimizing postoperative aspiration pneumonia. Clinical signs of aspiration pneumonia should be discussed and instructions given to have chest radiographs repeated if symptoms arise. Stress, anxiety and barking should be controlled and the use of neck leads discontinued.

Median survival times post unilateral arytenoid lateralization range from 1 to 5 years. Because polyneuropathy is suspected as an underlying etiology for laryngeal paralysis, affected dogs should be monitored for evidence of neuromuscular weakness and esophageal dysfunction. Despite complications, approximately 90% of dogs have a decrease in respiratory signs and improved exercise tolerance after UAL.



# VALLEY CENTRAL

VETERINARY REFERRAL CENTER

210 Fullerton Avenue  
Whitehall, PA 18052



VCVRC has been serving the Lehigh Valley and surrounding areas since 1996. We are dedicated to providing state-of-the-art veterinary care for your patients.

## Specialists at Valley Central Veterinary Referral Center

### SURGERY

Carlos Hodges, D.V.M., M.S., P.C.

*Practice Limited to Surgery*

Salvador Galindo, D.V.M.

*Practice Limited to Surgery*

### INTERNAL MEDICINE

Ronald Hodges, D.V.M., P.C., D.A.C.V.I.M.

Candace Carter, D.V.M., Ph.D., D.A.C.V.I.M.

### OPHTHALMOLOGY

Robert Peiffer, D.V.M., Ph.D., D.A.C.V.O.

Mary Landis, V.M.D., M.A.

*Practice limited to Ophthalmology*

### CARDIOLOGY

Dennis Burkett, V.M.D., Ph.D., D.A.C.V.E.C.C., D.A.C.V.I.M.

Ellen Davison, V.M.D., D.A.C.V.I.M.

Meg Sleeper, V.M.D., D.A.C.V.I.M.

Jonathan Goodwin, D.V.M., M.S., D.A.C.V.I.M.

### NUCLEAR MEDICINE

Ronald Hodges, D.V.M., P.C., D.A.C.V.I.M.

### BEHAVIOR

Robin Stephan

Animal Behavior Consultant

### ACUPUNCTURE

LEE SIMPSON, D.V.M., C.V.A., C.V.C.

### Continuing Education Schedule

#### Monthly Case Conferences:

The last Thursday of the Month from 12 PM–1 PM. For your convenience we are continuing to offer monthly case meetings thru web conferencing. For more details please call the office.

Discussions about clinical cases with medicine and surgical implications.

Lunch will be provided, courtesy of Hills, by Dr. Heather Berst.

Until our new web-site is launched, please refer to our Facebook page for updates to our CE schedule. You may also email Dr. Carlos at [Carlos@vcvrh.com](mailto:Carlos@vcvrh.com) with any questions about upcoming lectures.

