

# Central Connection

Your Connection to Valley Central - SPRING 2012



## Leaders in Specialty Care

Greetings to you all:

Spring has Arrived! We would like to thank each of you for your continued support of VCVRC.

In this second quarterly issue of CENTRAL CONNECTION, we have included articles written by Dr. Salvador Galindo, Dr. Robert Peiffer and Dr. Candace Carter. Our newsletter will keep you updated on medical topics, as well as new services being offered at VCVRC. The goal of our newsletter is to discuss current topics of interest in veterinary medicine as well as highlighted services at VCVRC. We understand that our success as a referral hospital is directly correlated to your confidence in our veterinary service. 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

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### Updates From VCVRC:

Paws to Us! We are happy to announce that we are also AAHA Referral accredited. This is another important accomplishment that we chose to pursue to further assure you that we are committed to providing the best veterinary care possible. Our accreditation in specialty medicine underscores our dedication to adhering to the principles that allow us to offer the highest standard of veterinary care to our clients and patients.

Less than 7% of specialty hospitals are AAHA accredited and we are extremely proud to be a part of this.

Again, our inspiration to strive for AAHA accreditation is you, the referring practices that have supported us over the years. We look forward to continuing to serve your needs as the leading referral hospital in the Lehigh Valley.

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## SURGERY

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

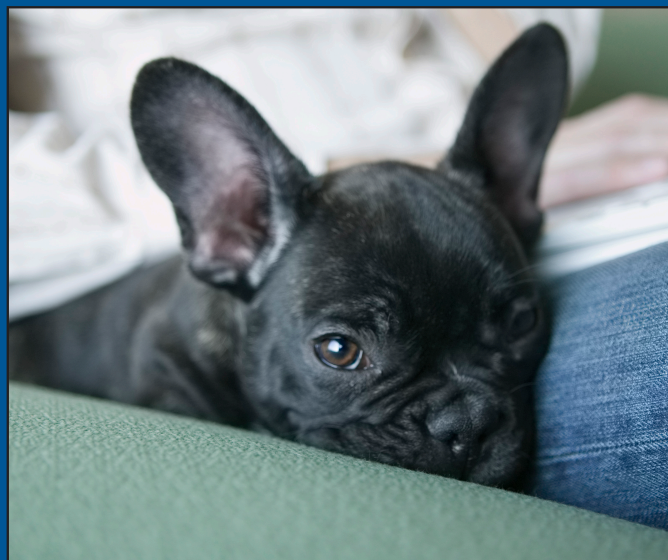
### Medial Shoulder Instability in Dogs; Diagnosis and Treatment

Treatment of injuries to the medial aspect of shoulders in dogs is considered amongst the most difficult canine orthopedic injuries and its diagnosis remains a challenge. In 1998, a French surgeon stated that the most common cause of forelimb lameness in medium to large breed dogs was associated with medial shoulder joint instability. This statement was followed by other studies that also revealed similar findings, suggesting that pathology affecting the medial stabilizers of the shoulder are the most common thus, medial shoulder instability comprises 80% of shoulder injuries. While shoulder joint instability in humans most commonly occurs due to peri-articular damage, pathological factors like trauma, atrophy and laxity of the structures of the shoulder joint, in dogs, it may lead to disruption of the joint stabilizing mechanisms.

Several treatment techniques for medial shoulder stabilization have been described. Reported surgical interventions used for medial shoulder stabilization include, biceps tendon transposition to the lesser tubercle, supraspinatus tendon transposition, prosthesis held by bone anchors and thermal capsulorrhaphy. These surgical procedures have yielded variable results without one surgical technique being completely superior to the other. Whenever any of those procedures fail, excision arthroplasty and arthrodesis can be performed.

**At Valley Central Veterinary Referral Center**, we use a novel technique that is aimed to stabilize the medial aspect of the shoulder joint. This novel technique consists of direct extra-articular stabilization through bone tunneling and placement of prosthetic ligamentous material. This surgical technique, although not published yet, is supported by a large number of cases of canine shoulders already treated. In our hands we start by the always challenging diagnosis. The diagnosis of shoulder instability is done based on previously described techniques including orthopedic and neurological examinations, pain elicited on direct shoulder palpation,

evaluation for positive cranial-caudal and positive medial-lateral drawer signs under general anesthesia, subjective medial increased angle of abduction seen on stress radiographs and arthroscopy. Once the diagnosis has been established, the novel technique is then applied with the patients under general anesthesia and under the strictest aseptic techniques available. The animals remain in our hospital for two days postoperatively, where immediately after surgery, they are started in a controlled physical therapy; this therapy consists of cold compresses, PROM and the application of cold laser. Detailed discharge instructions are provided to the owners as well as a physical therapy to be applied at home. Patients do not wear braces at any time during the recovery but owners are encouraged to sling support them until otherwise advised. In our experience, 93.5 % of our patients are sound and full weight bearing in the affected leg at four months after surgery. Recovery is slow but steady, as with any other type of joint repair, this can also be exacerbated depending on the amount of DJD present on the shoulder before surgery.





## OPHTHALMOLOGY

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

### **Intravitreal Cidofovir for Chronic Glaucoma**

Canine glaucoma is at best a challenging disease to treat successfully. Medical management of glaucoma with topical hypotensives is rarely successful on a long-term basis and surgical intervention is usually required to keep patients comfortable.

In eyes that are blind and chronically painful, enucleation or evisceration with prosthesis are the most common treatment options. However, many canine glaucoma patients are elderly with a myriad of systemic diseases that make them less than ideal anesthetic candidates. Financial constraints also may influence the decision for a major surgical procedure.

Chemical ablation using intravitreal gentamicin has been used to successfully lower intraocular pressure (IOP), however, patients usually require sedation due to the need for vitreocentesis and the relatively large volume of gentamicin required for ablation. Cataract formation is a common sequela.

Cidofovir is an anti-viral medication developed to treat cytomegalovirus retinitis in AIDS patients; side effects when given at a low dose in humans included hypotony. We have found that an intravitreal injection of cidofovir predictably results in a

hypotensive, comfortable eye without the need for sedation.

Detailed ophthalmic examination including ultrasound if necessary, is a requisite prior to injection to rule out intraocular neoplasia, uveitis, or endophthalmitis that may be contributing to elevated IOP and which are contraindications to the procedure. This technique is a cost effective, simple way to achieve comfort and cosmesis in blind, painful, chronically glaucomatous eyes.

Data from 167 avisional chronically glaucomatous canine eyes that were managed by the intravitreal injection of 562.5 ug of cidofovir following aqueocentesis over the period 2006-2011 were reviewed. Criteria for injection included canine patients with chronically glaucomatous, irreversibly avisional eyes that were refractory to medical management and without evidence of endophthalmitis or intraocular neoplasia as determined by historical, clinical and / or ultrasonographic examination. Cidofovir was prepared by dilution with sterile water to 3.75 mg/ml. The procedure was performed with topical anesthesia in the majority of cases. Following irrigation of the ocular surface with dilute povidone iodine, aqueouscentesis was performed



## OPHTHALMOLOGY

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

### **Intravitreal Cidofovir for Chronic Glaucoma (cont.)**

in order to minimize reflux through the vitreal injection site. This was achieved by inserting a 28 ga needle on a plungerless tuberculin syringe through the superior cornea just anterior to the corneoscleral junction. Allowing equilibration of intraocular and ambient pressure (typically removing approximately 0.3 ml of aqueous). A 30 ga needle was used to inject 0.15 ml (525 ug) of Cidofovir transconjunctivally into the vitreous, directing the needle through the sclera and pars plana 4-5 mm posterior to the superior limbus. Then 1 mg of triamcinolone was administered sunconjunctivally and topical treatment with neopolydex was prescribed 2x daily post-injection as required to control redness. Initial recheck was performed 10-14 days following injection.

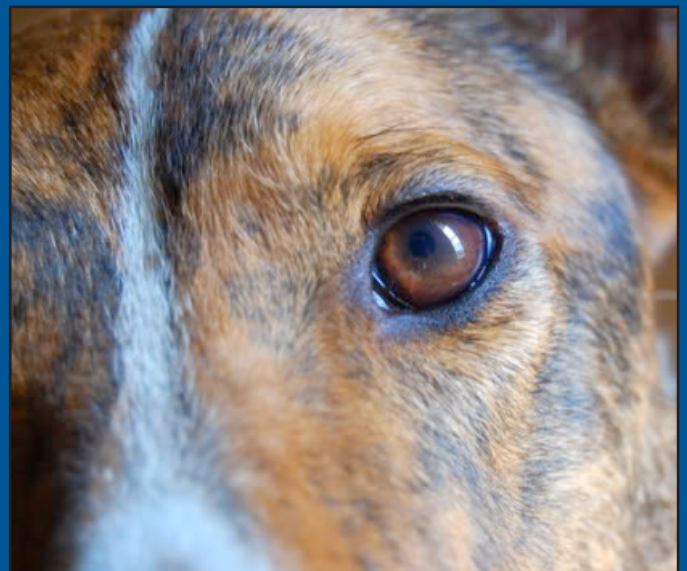
The mean starting IOP was 46 +/- 13 mm Hg with a median of 47 mm Hg. At the two week post injection recheck, the mean IOP was 10 +/- 11 mm Hg with a median of 6 mm Hg. Mild intraocular inflammation was a common post-injection finding and in all cases was managed medically with topical antibiotic-steroid solution. Post-injection complications included corneal ulceration, endophthalmitis, and progression to phthisis bulbus occurred in approximately 33% of cases.

Overall the procedure was effective in achieving a comfortable hypotensive globe. Resultant phthisis bulbus while resulting in comfortable eyes was a less than optimal cosmetic result. Current research is exploring lower doses to reduce the incidence of phthisis and potentially find a dose that while lowering IOP is not retinotoxic as a potential modality to treat primary glaucoma.

#### *Also Credited are:*

Martha Low - Resident in Ophthalmology

Mary Landis - Board Eligible in Ophthalmology







## INTERNAL MEDICINE

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

### Should I Refer This Case?

Tricky is a 12-year old, F/S, Pit Bull Terrier, with a history of increased panting over the past four months, polyuria, polydipsia a pendulous abdomen and a four pound weight gain. She has developed an occasional dry cough. Other than an increase body condition score (BCS) of 8/9 her physical examination was unremarkable.

Recent blood work indicated an increased ALP at 719 U/L and the remaining blood work including a total T4 was normal. A concurrent urinalysis was unremarkable with a USG of 1.027 indicating adequate renal tubular concentrating capacity. Chest radiographs did demonstrate a moderate, diffuse bronchointerstitial pattern consistent but not definitive for a bronchitis and/or bronchiolitis. The heart was plump with an increased vertebral heart score at 13.25 but pulmonary vessel size was normal. A urine cortisol creatinine ratio was performed and was normal at 6.

Given the history and clinical signs, a differential diagnosis of hyperadrenocorticism or Cushing's disease would neatly explain all of Tricky's clinical signs as well as the increased ALP. However, there are two reasons to refer this case. The enlarged heart is curious and could indicate underlying, concurrent cardiac disease. Further, ancillary adrenal testing did not support Cushing's disease.

The urine cortisol creatinine ratio was an excellent test choice to screen for hyperadrenocorticism. The sensitivity of the test is close to 100% so false negative test results are very unlikely. Therefore, a normal ratio makes Cushing's disease a very unlikely explanation for Tricky's clinical signs.

In fact, an ultrasound revealed an atrial mass with substantial pericardial effusion. The adrenal glands were normal in size and appearance but the liver parenchyma was mottled with numerous variably-sized nodules. Substantial amounts of free fluid dissected the liver lobes. The weight gain and pendulous abdomen would be

explained by ascites secondary to cardiac tamponade. The cause of the PU/PD and increased ALP may be related to underlying liver pathology but we didn't explore the liver changes any further.

This case is an excellent example both of how clinical signs can be misleading and the value a comprehensive examination. Old dogs get old dog problems and neoplasia is one of the most common geriatric problems seen in practice. I have read claims that dogs over the age of ten suffer from neoplasia 50% of the time. While this statistic may be high, I always recommend ultrasound as part of the diagnostic work up for geriatric pets with 'problems.' An ultrasound is an excellent means of screening for concurrent disease. Biochemical testing would not have diagnosed Tricky's neoplasia and an ultrasound was necessary to find the primary problem. When you have a case where things don't add up, it may be that the patient has multiple problems. An ultrasound may help because more often than not, lightning strikes twice in veterinary medicine.





**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*

Ezra Steinberg, V.M.D., D.A.C.V.S.

### **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**

Susan Bulanda, M.A.

Certified 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@vcvrc.com](mailto:Carlos@vcvrc.com) with any questions about upcoming lectures.

