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Living to give life

Ginger is an 11 year old female Labrador Retriever mix dog that presented to VNS on January 7th, 2008 for paralysis. Ginger had a history of two months progressive lameness on the left thoracic limb and then both pelvic limbs. Ginger was now down on all limbs.



Ginger—cancer survivor

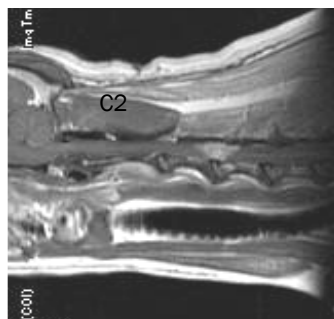
On neurological examination, Ginger was tetraparetic (weak all limbs) and non ambulatory. She could support weight on her limbs when assisted. There was no voluntary movement in the left thoracic limb but superficial pain was present. Normal limb reflexes were assessed. The dog was painful upon manipulation of the neck and kept her head extended at all times.

Because all four limbs were affected, and the reflexes of the limbs were normal, the localization should be rostral to C6 spinal cord segment. With normal mentation and cranial nerve examination, the problem is localized caudal to the brain. With the left thoracic limb being

worse, the final localization is C1-C5 myelopathy, left side worse. Most likely, in light of upper cervical pain, the problem is upper cervical.

Thoracic radiographs and complete blood panel (CBC, chemistry, electrolytes) were obtained as pre anesthetic profile and the results were within normal limits. MRI of the cervical spine was obtained.

On the T2W sagittal sequence, the lesion was hyperintense at the level of C3-4. On T1W pre and post contrast sagittal and T1W axial sequence through C3-4, the lesion was diffusely contrast enhancing and well defined borders. There was about 1/3 of the canal left for the cord. The lesion did not appear circular and seemed compressive to the cord.



TUMOR — C3 - 4

Surgery was performed two weeks later. A well defined firm mass was removed from the canal on the left side of the cord,

part of the dura. The mass was compressive to the cord. Tentative diagnosis was meningioma. Pathology at Dr. Sam Kennedy's laboratory confirmed the diagnosis.

Ginger recovered well and, two weeks later, at suture removal, she was ambulatory with only conscious proprioception deficit in the left thoracic limb.

Chemotherapy was initiated with lomustine at 60mg/m² every six weeks for six treatments. Complete blood counts were obtained at day 0, 3, 6, 9 and 12 to check for idiosyncratic bone marrow suppression.

Ginger continued to recovery and resumed a normal life. She also went into heat and when her owner confirmed her accidental pregnancy, all chemotherapy was stopped. On July 13th, 2008, Ginger gave birth to a her single black pup by caesarian section. Nugget is now over 90 pounds.

Let Ginger, Nugget and their owner be an inspiration to us all!



Nugget

Horner's syndrome



In children, Horner's syndrome can lead to heterochromia. Lack of sympathetic stimulation interferes with melanin pigmentation of the melanocytes in the superficial stroma of the iris.

It is named after Johann Friedrich Horner, the Swiss ophthalmologist who first described the syndrome in 1869. Several others had previously described cases, but "Horner's syndrome" is most prevalent. In France and Italy, Claude Bernard is also eponymised with the condition ("Claude Bernard-Horner syndrome").

Signs found in all patients on affected side of face include ptosis (drooping upper eyelid from loss of sympathetic innervation to the Muller or dorsal tarsal muscle), miosis (constricted pupil), enophthalmos (the impression that the eye is sunk in) and, in carnivores, prolapsed third eyelid. In horses, as in people, anhidrosis (decreased sweating) on the

affected side of the face and neck is noted.

The sympathetic pathway to the eye begins in the hypothalamus (first order neuro) and travels in the midbrain down the cervical spinal cord with the intermediate column (just lateral to the grey matter, fairly deep in the cord parenchyma) then synapses at T1-T4 (predominantly T1). At that level, the pathway (second order neuron) exits the spinal cord and travels with the vagosympathetic trunk, to the cranial cervical ganglion. The third order neuron travels by the petrous temporal bone, joins CN V from the skull base to the cavernous sinus where it joins CN II and III.

Knowledge of this pathways helps localize the lesion in your patients.

MRI Galore

Wow! The first month of having this new MRI has been a busy one. My days have been made up of long hours training on the machine, weekend seminars, lots of physics, and a ton of scanning. Being able to give clients and referring vets an answer the same day has made it all worthwhile. Not having to go off site for MRI, we are able to go straight into surgery as soon as we finish scanning. This saves clients traveling and anesthesia expenses. Of course we have been imaging a lot of spines and brains but also a number of extremities and other body parts already, providing our community with a powerful diagnostic tool for just about any body part. Ask me about it! *Missy Bolema, CVT*

SPO2

SPO2 should read 95% or higher. IF not, here are a few things to check. Make sure the tongue sensor is cleaned after each use. Keep a small squirt bottle of water in the OR to moisten the tongue with for better recording. Moving the sensor can be all you need. Make sure the sensor is not trapped between teeth or other. I cut catheter casings to size and prop the mouth open to avoid pressure on the tongue.

Denise Warner, CVT

**Tech
Corner**

Publication Reviews—what's new!

This section cover some of the neurological literature published over the



past six months

- Meningiomas in dogs show higher incidence of atypical tumors than in humans and MRI characteristics do not allow for prediction of meningioma subtype or grade. JAVMA 22(3)
- Case report on Bartonella-Associated meningo-radicle neuritis and dermatitis in 3 dogs from Virginia-Maryland and NCSU; Diagnosis can be difficult. Treatment is doxycycline-enrofloxacin or azithromycin. JAVMA 22(3)
- 34 dogs with intraspinal meningioma: Grade I tumors more likely; The MRI features and pathological features are described. CSF analysis was useful with elevated protein and mixed pleocytosis. JAVMA 22(4)
- An article on lumbar CSF analysis in dogs with Type I disc indicated moderate to marked pleocytosis being more common than previously thought. JAVMA 22(4)
- Epidemiology of necrotizing meningoencephalitis in pug dogs: most common in young adult female dogs; anticonvulsant medication helps increase survival. JAVMA 22(4)
- Computer assisted MRI brain morphometry in American Staffordshire terriers with

Helping you pet get back on its feet!

cerebellar cortical degeneration is reviewed: measurements are described and effective in differentiating from normal dogs. JAVMA 22(4)

- 50 dogs with fibrocartilagenous embolism were evaluated: severity of the neurological signs at the time of initial examination and extent of the lesions on MRI were associated with prognosis. JAVMA 233(1)
- MRI was evaluated as a diagnostic tool for nasal disease (78 cases): the lack of mass effect on MRI was significantly associated with inflammatory disease. Mass effect and bone destruction was associated with tumor. JAVMA 232(12)
- In cats (21) ventral bulla osteotomy for inflammatory polyps or other masses does not affect hearing as assessed by BAER. Most cats developed short-term Horner's syndrome. Cats with prior deafness remained deaf. JAVMA 233(4)
- Case report of a cat with multiple myeloma with CNS involvement (L5 vertebral body)—first report. JAVMA 233(5)
- Two dogs with massive midline occipitotemporal resection of the skull for treatment of multilobular osteochondrosarcoma: MRI and CT are essential for surgical planning. Assessing vasculature is essential as major vessels can be involved. The skull defects was replaced with PMMA. Collateral circulation was part of

success. Many dogs can succumb to these surgeries JAVMA 233(5)

- Multidrug sensitivity test at Washington State University—phenotyping ABCBI— JAVMA 233(6)
- Two articles in JAVMA 233(6) about owner questionnaires for perceived quality of life in dogs affected with spinal injury and type I disc disease. The questionnaires were suggested as helpful
- CT guided brain biopsy in diagnosing a cholesterol granuloma in a horse is described, out of Belgium. Very cool.
- One paper states that the number of calcified discs at two years of age was a good predictor of clinical disk herniation in Dachshunds. They recommend breeding against high numbers of calcified disk at two years of age. Out of Denmark. JAVMA 233 (7)
- Long term Phenobarbital therapy may lead to hypertriglyceridemia which is a risk factor for pancreatitis. JAVMA 233 (8)
- Out of Canada comes a great paper stating that dogs with spondylomyelopathy (104 cases) did not perform better with or without surgery suggesting that the risks of surgery may not be worth the benefits JAVMA 233(8).
- Visit www.vetneuromuscular.ucsd.edu/cases for very cool neuromuscular case reports.

Rendezvous with discovery

Palais des Congres de Montreal, Quebec
June 3-6, 2009
www.acvim.org

Connect with your peers with a cup of coffee and share! Join your local veterinary medical associations for networking!

Community—Holidays

Check out our web page for a list of the not for profit organizations we support and encourage you to be involved with.

This Holiday Season, I ask you to help your community and **collect pet food for our citizens in need**. Please ask your clients to join you and give to those who are about to lose their pets due to cost of maintenance. The Florida Dachshund Rescue and many other rescue groups, not to mention local shelters, have been inundated with animals. Dr. Thom Smith and the Southwest FVMA are already participating. Ask your local shelters how to best help them.

This year, in lieu of Holiday Cards, Veterinary Neuro Services LLC will make a donation to our Angel Fund (in process of 501(c)3 status) and to the ACVIM Foundation on behalf of all the Florida gulf coast veterinarians.



*Happy Holidays
and Pay It Forward!*

Vincent and Dr. Chauvet –Christmas 07



Vet-MR in house

- IT'S HERE!!!**
- We have already scanned 47 patients the first month.
- MRI is offered for **both neurological cases and for non neurological cases**. The former will require an exam by a neurologist first and the latter will require a prescription.
- MRI cost remains at \$1450 which includes anesthesia, the scan, the report and a copy of the scan to both owner and the referring veterinarian.
- All patients over 3 years of age

will need blood work no older than two weeks and thoracic radiographs no older than one month prior to anesthesia.



- Patients will have to be fasted 12 hours prior to anesthesia.
- Reports will be faxed and mailed within 24 hours. And a copy of the MRI will be provided to referring veterinarian AND client on CD.
- It is available 24/7 on a per need bases for an additional fee.
- For more information and Veterinary Neuro Services MRI brochures, please call 941-929-1818 or fax 941-929-1819.
- We welcome suggestions for names for the new MRI.