Clinical Research Participants Needed!

The Veterinary Medical Hospital NEEDS YOUR HELP!!

The Small Animal Surgery Department at Oklahoma State University Veterinary Medical Hospital has an ongoing clinical research study that, with your help, we can obtain the number of cases we need!

**Study:** A clinical, prospective study to identify a correlation between success of medical management for Hansen Type I cervical intervertebral disc disease with percentage of compressive myelopathy and resorption of herniated disc material using magnetic resonance imaging.

Hansen Type I Intervertebral Disc Disease (disc herniation) is one of the most common causes of myelopathy in dogs. Cervical IVDD occurs in about 13-25% of IVDD cases, while thoracolumbar accounts for the remainder. Treatment options for IVDD vary depending on the severity and progression of clinical signs; the prognosis, and potentially the best course of treatment, is based on clinical and/or diagnostic findings.

It is common for patients with cervical IVDD to present with severe pain only; 15-61% of patients with cervical IVDD present with cervical hyperesthesia, guarding of the neck, and muscle fasciculations without evidence of neurologic deficits. Medical management is reserved for patients who exhibit acute pain only with or without minimal neurologic deficits, such as delay or loss of proprioception, patients who exhibit paresis, but are strongly ambulatory, or when financial constraints are present. Although MRI has been utilized as a sensitive diagnostic tool to characterize and evaluate severity of IVDD compressive myelopathy, it has not been prospectively used to evaluate the likelihood that medically managed cervical myelopathy secondary to IVDD would improve. Retrospective evaluations suggest that patients with pain, with or without mild neurologic deficits, would have a higher likelihood of improving with medical management than those with more severe clinical signs. The goal of this study is to prospectively determine whether or not medical management of cervical IVDD is likely to be successful based upon percentage of spinal cord compression. Also, the study will determine if there is a correlation between degree of resorption of disc material and clinical outcomes with medical management.
HOW YOU CAN HELP!!

Candidates for this study will include those who are currently suffering from an acute episode of Hansen Type I Cervical Intervertebral Disc Disease and fit criteria for medical management of their condition.

Patients who can be included in this study must fit the following criteria:

- The patient must not be any worse neurologically than ambulatory tetraparesis with varying degrees of ataxia.
- The patient must have an acute episode that has been present for approximately 2 weeks. The best patients who will fit this study are those that have an acute event to where the owners present to your clinic for sudden pain, neurologic deficits, and have not been receiving long term pain medications prior to your examination.
- If you have a patient who fits the criteria of medical management for a presumed cervical disc extrusion (Hansen Type I IVDD), we ask that you consider offering them to come to OSU.

WHAT THE PATIENT WILL RECEIVE:

- The patient will receive an exam, up to three nights hospitalization to control more severe pain if needed, pain medications, and an MRI scan (including anesthesia) at the time of appointment ($1,500-2,000 value).
- The patient will be sent home for continued medical management (as you would have initiated prior to the patient arriving at OSU). We will recommend a pain management protocol for consistency amongst the patients enrolled in the study. Our pain management protocol will consist of tramadol (3-5mg/kg PO TID), carprofen (2.2mg/kg PO BID) or an alternative NSAID based on your preference, +/- gabapentin (5mg/kg PO TID), if needed. Therefore, if you see a patient and are interested in sending them up to OSU, we ask that you provide the patient with this pain management protocol prior to their arrival, if possible.
- The patient will receive a second, free MRI scan ($1,400) 12 weeks after recovery from medical management; or if medical management fails greater than 4 weeks after the first MRI scan.

Any surgical procedure or hospitalization that must be performed for severe pain/worsening of neurologic signs despite appropriate medical management will be at the owner’s expense.

Without your help we cannot perform this study! We appreciate your consideration in helping us to provide information to the literature that is currently not documented and is often questioned.

If you have any questions, please do not hesitate to contact Dr. Danielle Dugat, the Principal Investigator of both studies. Dr. Dugat is an Assistant Professor of Small Animal Surgery. She has developed a research interest in IVDD, the PLDA procedure, and evaluation of the medullary blood supply within the feline tibia. You can contact Danielle Dugat at 405-744-7000 or email her at danielle.dugat@okstate.edu. If you have a case that you would like to send, you can also call the hospital and schedule them to come in as an appointment or emergency through Small Animal Surgery.

Thank You in advance for your help!!

GO POKES!
Navicular syndrome is a chronic disease process of the equine digit affecting horses of most breeds and disciplines. Many treatments exist but unfortunately most of these modalities yield inconsistent results at best. Presently, there is no cure for navicular syndrome and regardless of treatment, only 65-75 percent of affected horses improve in performance and only 40-50 percent remain sound for one to two years.1 Bisphosphonate medications such as tiludronate and clodronate have recently been approved and marketed as treatments for equine navicular syndrome. This use stems from the marked response to treatment observed in bone resorptive diseases in human medicine where bisphosphonates have been used since the 1960’s. Bisphosphonates work by binding to circulating calcium and other divalent metal ions. They then bind to bone hydroxyapatite crystals at areas of active remodeling. Here they cause decreased recruitment, activity and lifespan of osteoclasts, which are the cells responsible for bone resorption.

Tiludronate (Tildren®) is labeled to be given as a systemic IV infusion; however, some equine practitioners have deviated from systemic administration and developed regional limb perfusion protocols. Anecdotally, these practitioners report improvement in lameness but the individual protocols are variable and inconsistent. Differing drug doses, as well as the number and frequency of perfusions used, make it difficult if not impossible to draw reliable conclusions as to the efficacy of these treatments. Potential benefits of the use of tiludronate by regional limb perfusion include reduced cost and improved safety as compared to systemic administration.

A group of OSU researchers recently conducted a clinical trial to objectively determine the efficacy of tiludronate for treatment of horses diagnosed with navicular syndrome. In this study2, six horses received the labeled systemic dose of tiludronate while six horses received a single regional limb perfusion in each forelimb using one tenth of the systemic dose. No other treatments were allowed and the force plate was used to objectively quantify lameness over a six-month period. Objective improvement was seen in the systemic treatment group but not in the regional limb perfusion group; however, none of the horses treated achieved what was considered soundness. The group concluded that tiludronate administered at the recommended systemic dose and route appears to be a beneficial adjunctive treatment for horses with navicular syndrome but may not be effective as a sole treatment. Additionally, more research on the efficacy of regional limb perfusion protocols is needed before this route of administration can be recommended.

To follow-up this latest trial, these researchers are recruiting horses diagnosed with navicular syndrome to further evaluate the efficacy of tiludronate as a regional limb perfusion. This is a blinded, controlled study that will evaluate two different doses of tiludronate given as a regional limb perfusion three times at ten day intervals. All horses will be shod and administered coffin joint injections of triamcinolone and hyaluronate prior to tiludronate treatment. The force plate will be used to quantify baseline lameness and response to treatment over a 120-day period.

For inclusion in this trial, horses must display bilateral forelimb lameness (AAEP grade 2-4/5) which shows clinical improvement to palmar digital perineural anesthesia and also have radiographic changes consistent with navicular syndrome. Additionally, horses must not have received any prior bisphosphonate therapy. All costs associated with treatments outlined in the study design are free of charge. The owners are responsible for presenting the horse to OSU for treatment and evaluation at specific time points. For more information or to refer a patient for possible inclusion in this clinical trial contact Drs. Mike Schoonover or Chase Whitfield at the OSU Veterinary Medical Teaching Hospital at 405-744-7000, ext. 2 or email mschoon@okstate.edu.


OSU/OVMA Summer Seminar

June 17-18, 2016
McElroy Hall
Stillwater, OK

Oklahoma State University
2016 CVHS Annual Fall Conference
for Veterinarians and Veterinary Technicians

October 13-14, 2016
Oklahoma State University
Wes Watkins Center
Stillwater, OK

Online Early Bird Registration Opens by July 1
http://cvhs.okstate.edu

Questions? Contact E. Giedt, DVM 405-744-8587 or giedt@okstate.edu
The Benefits of Pet Insurance to Small Animal Practice

Sponsored By:

- **Increase client visits and practice revenue** – Pet owners with pet insurance visit their veterinarian more often and spend more on veterinary care.

- **Not like human managed care** - Pet insurance is property insurance and is very different from human managed care, protecting veterinarians from the negative aspects of managed care, such as loss of control over treatments and pricing.

- **How it works** – New policies that offer a flat reimbursement to pet owners, adding transparency and greater acceptance of your treatment recommendations.

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**Carol McConnell, DVM, MBA, Nationwide Chief Veterinary Medical Officer**

**Thursday, April 21st 2016**

**Dinner Meeting:** 5:30 p.m. – 7:30 p.m.

**Location:** Oklahoma State University Center for Veterinary Health Sciences
McElroy Hall Auditorium, Room 101

**Veterinary Business Management Association Chapter Meeting**

This presentation will provide category 2 Business Certificate credit for VBMA members

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**Please RSVP for dinner headcount:**

Kaitlyn Belanger, Oklahoma State University VBMA Co-President

kaitlynbelanger14@gmail.com

Or

Elisabeth Giedt, DVM, MBA

Director of Continuing Education, Extension and Community Engagement

giedt@okstate.edu 405-744-7672

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**Oklahoma State University**

**Center for Veterinary Health Sciences**

Healthy Animals — Healthy People
Bulls with pendulous sheaths and polled breeds have a high incidence of preputial injuries. A significant relationship appears to exist between a pendulous sheath and the tendency of habitual eversion of the prepuce. In polled breeds, this tendency may be due to incomplete development of the preputial muscles. The development of preputial muscles maybe linked to the polled gene. The combination of being polled and having a pendulous sheath, which occurs in breeds such as the Brangus, Beefmasters and Santa Gertrudis, results in a greater likelihood of preputial injuries.

The types of injuries to the prepuce can be categorized as lacerations, avulsions, contusions, frostbite, and abrasions. Lacerations, contusions, and abrasions are common in range conditions.

If there is habitual eversion of the prepuce, injury and infection leads to fibrosis, and later phimosis or stenosis of the prepuce. Surgery is indicated, if the bull is going to be used for future breeding. Infection of the prepuce sometimes may lead to abscess formation. The location of the abscess is usually midway between the preputial opening and the scrotum. Bulls with preputial abscess seldom recover totally to be used later for breeding purposes. Paraphimosis (prolapsed penis) due to injury of the penis or frost bite, is serious and often results in the bull being sold for slaughter at a considerable economic loss to the owner.

Acute preputial prolapse should be managed conservatively. Therapy involves cleaning the area and prolapse reduction. The author prefers preputial massage using a formula of 0.5 kg of lanolin containing 60 ml scarlet oil and 60 ml of oxytetracycline (100mg or 200mg) called “Petersillin or Petermycin.” The lanolin provides good protection for the tissue, preventing dehydration. The scarlet oil promotes epithelialization and healing, and the tetracycline provides a broad-spectrum antibiotic. The benefits of preputial massage for acute cases of preputial prolapse cannot be over-emphasized. Fifteen to 20 minutes of continuous massage will have a marked effect in reducing edema. The objective is to massage the edema or swelling of the prolapsed tissue and replace the prolapse back in the sheath, thus providing protection for the tissue from exposure and additional trauma. Once reduction is accomplished, preputial retention is necessary using either a purse string suture or the tape/tube retention technique. The preputial retention device is left on for two weeks to let the prepuce heal and reduce the edema. Then, the preputial retention device is removed and the bull is observed daily for two to three days to assure that the prepuce does not prolapse. If prolapse recurs, it is reduced and therapy is continued for 10 to 14 days. Once the prepuce has healed, and if the bull cannot keep the prepuce inside its sheath, surgery is indicated. In the author’s experience it is better to let the prepuce heal and give the bull sexual rest for at least eight weeks. This gives enough time for the prepuce to heal and shrink the amount of scar tissue if surgery is needed. After the healing process, “reefing surgery” or “preputial amputation” surgery is indicated to remove the excess prepuce or phimosis of the preputial cavity.

Chronic preputial prolapse with severe tissue damage, edema, and necrosis is often due to the result of neglect or poor observation. Often, the inflammation and necrotic tissue on the prepuce is so extensive at the time of initial examination, it is extremely difficult to make an accurate prognosis. In these cases, a poor prognosis must be given and the owner advised that seven to 10 days of therapy may be necessary before a prognosis is attempted. Often, chronic prolapses cannot be reduced initially and require extensive therapy before reduction can be accomplished. If extensive fibrosis and stenosis are present, reduction may not be possible. Treatment involves hydro therapy, soaking the prolapsed prepuce with Epsom salt for 30 minutes, then massaging with the previously described formula for 10 to 15 minutes in an attempt to reduce the prolapse. In cases in which reduction cannot be accomplished after every treatment, lanolin formula is applied to the prolapsed tissue, and a 2-inch stockinet is rolled over the prepuce, and a pressure bandage applied. Rubber tubing is placed in the prolapsed prepuce to provide a patent opening for urine. Pressure bandage is applied using a gauze over the stockinet, vet wrap and elastic tape applied with moderate amount of pressure (pressure bandage). The pendulous prolapse is then supported with either a diaper or sling, depending on the temperament of the bull. The dressing is changed daily and attempts are made to reduce the prolapse. Once the inflammation and swelling have subsided, the degree of fibrosis can be evaluated.

Surgical intervention is usually considered if fibrosis and stenosis have occurred. However, caution should be exercised to allow sufficient time for complete healing to occur; this often requires six to eight weeks of sexual rest. Reevaluation after the rest period allows not only a better assessment of the need for surgery but also the opportunity to reevaluate genetic and economic factors. Clients should be reminded that perhaps another bull should be obtained. The British breeds often do not possess enough preputial tissue to permit the removal
Preputial Injury (continued)

Osteoarthritis is a common cause of performance limiting lameness of many equine athletes. Equine disciplines that incorporate activities which induce torsional and shear forces to the hocks, such as reining, cutting, roping, barrel racing, jumping or dressage, promote the development of osteoarthritis of the distal hock joints.1

The desire of horse owners and veterinarians to return affected horses to performance has introduced numerous treatment options aimed to reduce the pain and/or minimize the joint deterioration seen in those effected with distal hock osteoarthritis. Medical treatment options include the use of non-steroidal anti-inflammatory, corticosteroids, hyaluronan, autogenouss biologicals and other chondroprotective agents, however, osteoarthritis is a progressive, incurable condition and these treatment modalities are palliative and, at best, provide temporary pain relief.2

The low motion nature of the distal hock joints make them ideal candidates for facilitated ankylosis techniques. While numerous techniques exist and are commonly employed, laser facilitated ankylosis of the distal hock joints is becoming an increasingly popular method.1,3,4

The benefits of laser facilitated ankylosis over other techniques include shorter convalescence period and a seemingly high percentage of horses returning to soundness and performance.4 Several reports in the veterinary literature describe the use of this technique in normal, non-arthritic joints1,3 but, to date, none exist experimentally evaluating this technique in horses that have clinical evidence of osteoarthritis of the distal hock joints.

Researchers at Oklahoma State University’s Center for Veterinary Health Sciences have initiated a clinical study and are recruiting client owned horses to evaluate the efficacy of a technique for laser facilitated ankylosis of the distal tarsal joints on lameness in horses caused by osteoarthritis of the distal hock joints. To be included in the study, horses need to display a primary hind limb lameness (unilateral or bilateral) that improves clinically following intra-articular anesthesia of the DIT and TMT joints. Additionally, radiographic change consistent with osteoarthritis of the DIT and/or TMT must be present.

Horses included in the study will undergo baseline and six monthly post-treatment soundness evaluations. Soundness will be evaluated both subjectively, by blinded observation, and objectively using a force plate. All costs associated with the surgical procedure outlined in the study design are free of charge for any horse included in the study. The owners must be willing to present the horse to OSU for treatment and evaluation at specific time points to allow follow-up data collection.

For more information about the study design or to refer a patient for evaluation and possible inclusion in this clinical trial, please contact Drs. Amanda Plunkett, Mike Schoonover or Dan Burba at the OSU CVHS at 405-744-7000, ext. 2 or email mschoon@okstate.edu.