We encourage you to e-mail Angell’s specialists with questions. We hope you will use Angell as a resource, and we look forward to working with you as we continue our legacy of providing compassion and care for animals.

PARtneRS

Angell Animal Medical Center Referral

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Boston, MA 02130
Main Phone: 617-522-7292
Veterinary Referrals: 617-522-5011

Chief of Staff
Ann Marie Manning, DVM, DACVEE
annm@angell.org

Avian & Exotic Animal Medicine
Jennifer E. Graham, DVM, DACVB, Avian
agraham@angell.org
Connie J. Curtin, DVM, DACVP-Anim
Jean curtin@angell.org

Cardiology
Nancy J. Laste, DVM, DACVIM
nlaste@angell.org

Rebecca L. Malakoff, DVM, DACVIM
rmalakoff@angell.org

Clinical & Anatomical Pathology
Patty Ewing, DVM, DACVP
pewing@angell.org

Internal Medicine
Pamela Mouser, DVM, MS, DACVP
pmouser@angell.org

Douglas Brum, DVM
dbrum@angell.org

William Rosenblad, DVM
wrosenblad@angell.org

Curtis A. Stiles, DVM, DACVEE
csstiles@angell.org

Dermatology
Kathy Tater, DVM, DACVEE
dermatology@angell.org

Diagnostic Imaging
Jessica Basseches, DVM, DACVEE
diagnostics@angell.org

Kathy A. Beck, DVM
kbeck@angell.org

Joan Regan, DVM
jregan@angell.org

Emergency & Critical Care Medicine
Kiko Bracker, DVM, DACVEE
kbracker@angell.org

Jennifer Holm, DVM
jholm@angell.org

Megan Whelan, DVM, DACVEE
mwhelan@angell.org

Oncology
Christine Anderson, DVM, MS
christine@angell.org

Maureen Carroll, DVM
maureen@angell.org

Karin E. de Papp, DVM, DACVP
dkpapp@angell.org

Jean Marie Duddy, DVM
jduddy@angell.org

Chris Rollings, DVM
crollings@angell.org

Neurology
Andrew Farbaugh, DVM
afarbaugh@angell.org

David M. Knapp, DVM
dknapp@angell.org

Allen Sisson, DVM, MS
aisson@angell.org

Surgery
Sue Casale, DVM, SKCV
scasale@angell.org

Michael M. Pavletic, DVM
mpavletic@angell.org

Catherine J. Reese, DVM, DACVP
cjreese@angell.org

Nicholas J. Truitt, MS, VT, MA, MVIS
ntruitt@angell.org

Pain Medicine
Lisa Moses, DVM, DACVS
lmoses@angell.org

www.angell.org

Dr. Carroll (left) looks on as Dr. de Papp uses a telescope to examine the abdomen.

Many of our patients have benefited from laparoscopy. One is a 10-year-old Labrador Retriever who presented with the history of an ultrasound-guided liver biopsy diagnosis of liver necrosis, most likely secondary to toxin exposure. As the dog did not respond to therapy as expected, we offered to perform a laparoscopic exploratory. Upon doing so, we discovered a large lobule that was invaded with abnormal tissue which was histologically proved to be a poorly differentiated carcinoma.

Other examples where laparoscopy is most beneficial include dogs with microhepatia, making ultrasound-guided liver biopsy impossible, and patients with poor healing potential where laparoscopy would pose high risk. (e.g., cushingoid, diabetic or hypoalbuminemic patients). Animals with acute of unknown origin are also great cases for laparoscopy as we can explore the abdomen and take peritoneal biopsies.

Finally, the time it takes to perform a laparoscopy, which includes exploration of the abdomen and sample collection, is relatively short—in some cases taking as little as 20 minutes. Many of these patients can go home the same day which is not the case with most ultrasound-guided liverbiopsies and exploratory surgeries.

In short, laparoscopy is an efficient, safe diagnostic modality to assess patients when ultrasonography is insufficient and exploratory surgery is too invasive. Our diagnostic capabilities continue to expand and we look forward to helping you with your patients.

To learn more about laparoscopy and watch a video of a procedure, please visit www.angell.org/ophthalmology. To refer a client to Angell’s Internal Medicine service, please contact Referral Coordinator Eleanor Cousino at 617-522-5011 or by fax at 617-989-1615.

DIAGNOSTIC LAPAROSCOPY

Laparoscopy has been added to our expanding list of diagnostics offered at Angell Animal Medical Center. Maureen Carroll, DVM, DACVIM and Erika de Papp, DVM, DACVP of Angell’s Internal Medicine service, spear-headed the program two years ago which is now up and running with a steady flow of cases in dogs and cats of all sizes.

Laparoscopy involves an abdomen through two or three small incisions. Through these incisions, telescopes and biopsy instruments are inserted to obtain samples from organs such as the liver, pancreas, kidney and even the small intestine. The benefits of this modality versus ultrasonography are many.

First, we are able to examine the organ with the aid of a telescope and camera, allowing real-time visualization of the area of interest on high-definition video. In contrast, ultrasonography allows visualization of organs in shades of grey which places us at a disadvantage when precise localization of a lesion is our intent. Second, the sample sizes obtained via laparoscopy are very large, allowing us to obtain other samples for biopsy, culture, heavy metal analysis and PCR if necessary. Lastly, in the event bleeding is caused by biopsy sampling, with our instrumentation we can apply pressure, get foam or even cauterize the area in attempts to avoid severe bleeding.

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Finally, the time it takes to perform a laparoscopy, which includes exploration of the abdomen and sample collection, is relatively short—in some cases taking as little as 25 minutes. Many of these patients can go home the same day which is not the case with most ultrasound-guided liver biopsies and exploratory surgeries.

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ANGELL’S GROWING OPHTHALMOLOGY SERVICE

The Ophthalmology service at Angell Animal Medical Center is uniquely qualified to provide extensive diagnostic and treatment of inherited, acquired or traumatic conditions involving the eyelids, cornea, iris, retina, optic nerve and orbit.

Daniel Bros, DVM, DACVO, has been heading the Angell Ophthalmology service since 2000. He and his staff of four technicians examine a wide variety of species using direct and indirect ophthalmoscopy, slit-lamp biomicroscopy, Schirmer tear testing, topical fluorescein staining, tonometry, gonioscopy, ocular ultrasonography, PRR and electroneurography.

CONTINUED ON PAGE 3
Stem Cell Therapy: Another Alternative Treatment of Canine Osteoarthritis

Sue Casale, DVM, DACVS

Osteoarthritis (OA) is one of the most common causes of chronic pain in dogs. Studies have shown that more than 20% of dogs suffer from OA with the most common signs being pain, stiffness and loss of mobility.

Medical management with non-steroidal anti-inflammatory drugs (NSAIDs) may not provide complete pain relief in many dogs. Other sought-after dietary supplements, acupuncture and joint injections. A new and rapidly growing area of research in the treatment of OA involves the use of regenerative medicine. Regenerative medicine does not rely on a single pathway or target receptor to work. Instead, mesenchymal stem cells are delivered to an area of damaged tissue where they stimulate regeneration and aid in repair of the damaged tissue. The function of these cells is diverse and includes promotion of anti-inflammatory pathways, anti-apoptosis and trophic support through the secretion of cytokines and growth factors that support angiogenesis and tissue remodeling. In addition, mesenchymal stem cells are multipotent and have the ability to differentiate into many different cell types such as tendon, bone, ligament and cartilage, which may further help in the repair of damaged tissue.

The stem cells currently being used in veterinary medicine are autologous adult stem cells. Mesenchymal stem cells are derived from the animal’s own adipose tissue and once isolated, can be injected intra-articularly to provide a large concentration of the cells to the area of injury. Because the injected cells are derived from the animal’s own tissue and are minimally manipulated there is almost no risk of rejection or reaction. According to Vet-Stem, Inc., the company that isolates the stem cells, over 2,500 horses and 500 dogs have been treated with stem cell therapy in the past six years with less than 0.5% tissue reactions.

Stem cell therapy does not cure OA; the goal of stem cell therapy is to provide long-term anti-inflammatory effects, slow the progression of cartilage degeneration and initiate healing of the damaged tissue. This provides pain relief within a few days to a few weeks after the injection with further improvement as healing progresses. Additional injections may be required to maintain this improvement.

Stem cell therapy has been utilized in equine cases since 2003 but is just beginning to gain acceptance as a treatment for canine OA. There are currently two studies in veterinary literature that show significant improvement in lameness in dogs with hip and elbow OA following treatment with stem cells. Both studies were sponsored by Vet-Stem, Inc. and both studies have limited numbers of cases, however, the results are promising. Follow-up for dogs in both studies was six months or less, so duration of improvement is not known at this time.

Several patients have been injected with stem cells at Angell Animal Medical Center with subjective improvement seen. Treatment, including harvest of the stem cells, is performed by a Board-Certified Veterinary Ophthalmologist.

References:

Additional information is available on Vet Stem’s website at www.Vet-Stem.com.
To refer a client to Angell’s Surgery service, please call 617-522-5011 or visit www.angell.org/surgery.

For information on other clinical studies at Angell, please visit www.angell.org/studies.