

Newsletter of the COMMUNITY PRACTICE SERVICE

College of Veterinary Medicine, Washington State University
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Angus

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Hodge the Cat—Beating the Odds against Heart Disease

Seemingly healthy pets brought to the WSU Community Practice for routine checkups sometimes receive a diagnosis of something other than a clean bill of health.

Such was the case of Hodge, a lovable, comfy, and somewhat overweight 17-pound orange tabby cat. Hodge's owner, Lillian Ashworth, was concerned that her 15-year-old companion may be susceptible to kidney disease after the loss of her other cat of 15 years named Barney, who had died of kidney disease in March 2004. Shortly after, she made an appointment for Hodge at the Community Practice.

"After I brought Hodge in to check his kidneys, a base line was established and I was to bring him back in the fall to have a second panel run," said Ashworth, a

Pullman free-lance writer who specializes in back-of-the-book indexes. "In August, I noticed he was aging, but didn't think he had any issues to worry about."

But on the day of his scheduled kidney exam, Hodge's veterinarians found he was seriously ill. "After I brought him in, he was whisked into ICU," Ashworth said. "I was in a state of shock for the rest of the afternoon because he seemed perfectly normal prior to the appointment. I didn't know if I would ever see him again."

Hodge was suffering from restrictive cardiomyopathy, a common heart disease in cats in which the heart muscle is replaced by fibrous tissue or scar tissue. This tissue

makes it difficult for the heart muscle to contract well. A poorly functioning heart leads to other problems throughout the body. Symptoms of the disease may be subtle, but can include rapid breathing and panting without a cough, unlike humans and dogs who generally do cough with this disease.

"When he came in for his appointment, Hodge was breathing hard and we determined that he had an irregular heartbeat and abnormal lung sounds," said **Dr.**

Raelynn Farnsworth, a veterinarian on the Community Practice team. "So we took chest radiographs that showed that he had fluid around his lungs, a condition called pleural effusion."

"We tapped his chest and

pulled eight ounces of fluid off of it and had it tested to see what kind of fluid it was," Dr. Farnsworth said. "The fluid was indicative of heart disease in cats. At this point, we consulted with the Cardiology Service in the veterinary teaching hospital to figure out the best way to treat Hodge."

Dr. Lynne Nelson, WSU's board certified veterinary cardiologist, performed a cardiovascular examination of Hodge consisting of blood pressure monitoring and an echocardiogram, which is an ultrasound examination of the heart. Through these specialized tools, Dr. Nelson was able to diagnose Hodge's problem.

Continued on back page



Hodge

The Veterinary Cardiology Service at WSU

Pet owners can learn the condition of their animals' hearts via the specialized staff and technology of the cardiology service at the WSU Veterinary Teaching Hospital in Pullman.

Complete examinations can be conducted for animals with conditions such as heart disease and congenital heart defects. Pre-breeding heart examinations can also be performed for certain animal breeds that may have inherited heart disorders.

These are some of the most common reasons why pets are referred to the cardiology service, headed by **Dr. Lynne Nelson**, an assistant professor at WSU and a board certified specialist in cardiology by the American College of Veterinary Internal Medicine. Last year, the cardiology service treated more than 550 animals.

"We have a lot of success with our patients," Dr. Nelson said. "A vast majority of our cases we are able to help to a certain degree, and for some patients with problems like congenital heart disease, they can be cured."

Other common cases that are seen by the cardiology service include animals with degenerative heart valve disease, congestive heart failure, irregular heartbeats called arrhythmias, infections and tumors of the heart, heartworm disease, and systemic high blood pressure.

Often, heart problems are discovered when an owner brings in a pet for a routine veterinary checkup. "This is fairly common in older animals that are brought in for one problem, and during an exam, they are found to have heart murmurs or other heart-related problems," Dr. Nelson said. "We work frequently as a consultation service for our own hospital's Community Practice and other services."

Animals referred to the cardiology service generally undergo a cardiovascular examination and diagnostic testing that may include chest x-rays and an electrocardiogram or ECG. An ECG is a visual record of the heart's electrical activity. An echocardiogram may also be performed. This diagnostic tool uses ultrasound energy to examine a working heart and display moving, colorized images of its action. Some pets are also observed with a Holter monitor, a technique where an animal wears a "backpack" that records heart rhythms 24-hours-a-day.

Heart problems not discovered through those tools may require further diagnostic testing, including cardiac catheterization. This procedure is performed in a specialized lab with cardiac pressure monitoring, fluoroscopy to view real time x-ray images of the heart on a screen, and angiography to view digital x-ray images of blood vessels contrasted with

an opaque dye. Through cardiac catheterization, more exact blood and heart pressures can be obtained and contrast studies can be performed for complex heart diseases and congenital birth defects.

Once a diagnosis is made, medication may be prescribed or surgery may be an option. Clients are provided with a full range of appropriate options and cost estimates to help make their decision.

The most common cardiac surgical procedures include pacemaker implantation and balloon dilation valvuloplasty to open a patient's heart valves. Other advanced procedures are also performed. In 2003, Dr. Nelson and cardiology resident and graduate student **Dr. Sunshine Lahmers** successfully performed the first surgery to place an implantable cardiac defibrillator in a dog. Complete details of this

landmark procedure can be found at www.wsunews.wsu.edu/detail.asp?StoryID=3869.

Dr. Nelson joined the WSU veterinary team five years ago, after an extensive career in veterinary private practice and at Iowa State University. In addition to working with small animals, she

is conducting a non-invasive study on the cardiac function of hibernating bears for clues that may help lead to therapies for heart disease in humans and other animals. More information about Dr. Nelson's studies can be found online at the WSU College of Veterinary Medicine's Web site at www.vetmed.wsu.edu.

The WSU cardiology team also includes Dr. Lahmers, a four-year resident currently training to become board certified in veterinary cardiology. She assists with surgeries and medical management of patients, trains veterinary students how to recognize heart disease, and provides additional cardiac information they will be able to use in private practice.

Pam Thompson is the team's veterinary technologist. This veteran talks with clients and answers many of their routine questions. She also handles the surgery schedule, performs lab work, and conducts various tests, such as blood pressure measurements, x-rays, and ultrasounds. She also helps teach students about the lab work and testing procedures of cardiology.

For more information about the cardiology service or referrals, contact the WSU Veterinary Teaching Hospital at 509-335-0711.



The WSU Veterinary Cardiology Staff (l to r)—Dr. Sunshine Lahmers, Dr. Lynne Nelson, and veterinary technologist Pam Thompson with her pet schnauzer Asia.



Dr. Nelson and an intern taking an echocardiogram of a Chihuahua's heart.

