

“Spotty” was your typical housedog-bright and energetic. His favorite pastime, next to eating, was chasing and generally harassing the two cats that he shared the house with. Ms. Smith, “Spotty”’s owner, had brought the little guy to see me ever since he was a puppy. That was 10 years ago. Recently Ms. Smith had noticed “Spotty” was a bit less active, wasn’t finishing his meals, and most notably was coughing a fair amount. When I examined “Spotty” he wasn’t really all that sick but it was obvious that he wasn’t his usual self. After a physical exam and running some tests we concluded that he was developing Congestive Heart failure and needed to take medication to help control it. “Spotty” responded well to his new medication and in no time was back to his old habits of chasing the cats. The cats were not pleased.

The heart is a relatively simple muscular pump that pushes blood through the lungs to pick up oxygen and then delivers that oxygen as well as nutrients to the organ systems around the body. The cardiovascular system, among other things, requires a strong, reliable heart muscle, one-way valves in the heart to keep blood flowing in the right direction, and a nervous/electrical system that keeps the heart beating in a regular rhythm. While this model of the mammalian heart may be a bit oversimplified it serves a good purpose for our discussion of common heart problems in pets. I like this model particularly because, with a few exceptions, most heart diseases of pets can be grouped into 3 categories: diseases involving the heart muscle, diseases of the heart valves, and diseases of irregular heartbeat rhythm.

Heart diseases caused by dysfunction of the heart muscle are called cardiomyopathies. These types of diseases are seen in both dogs and cats. In some cases the heart muscle becomes weak and thin, unable to pump adequate amounts of blood to the body. In other forms of cardiomyopathy the heart muscle becomes overly thickened and stiff; again limiting its ability to pump blood. In many cases the underlying cause of these heart muscle changes is unknown. In other cases a genetic or even a nutritional cause is suspected. We suspect genetics likely play a role because we see it more commonly in certain breeds. Boxers, Doberman Pinchers, and Cocker Spaniels are breeds of dogs that are well recognized for their problems with cardiomyopathy. In cats, the Siamese and Burmese breeds may be at higher risk.

Faulty valves in the heart cause the most common cardiac problems seen in our pets. It’s clear that for blood to flow through the heart in only one direction there must be valves to keep blood flowing forward-instead of backward-each time the heart beats (contracts). Most people have heard of a human condition called Mitral Valve Prolapse. Dog and cat hearts also have a Mitral valve. This valve commonly becomes thickened and irregularly shaped causing it to leak. The malfunctioning, leaky valve over time results in the loss of unidirectional blood flow through the heart and this can result in Congestive Heart Failure. “Spotty”, the dog mentioned above, had Mitral valve disease.

The least common heart problems we see in domestic animals are those related to abnormal rhythms of the heart. These arrhythmias, as they’re called, can vary from benign, inconsequential irregular rhythms to severe, life threatening cardiac failure. Arrhythmia’s can be caused by a primary problem with the heart or can result from several non-cardiac health conditions as well. This is why cardiac arrhythmias can be challenging for both patient and doctor.

You may be wondering why I’ve not mentioned the ever so common human ailment, coronary heart disease. This is where the blood vessels to the heart muscle itself become blocked with plaque and other deposits, resulting in a “heart attack”. Interestingly, dogs and cats do not have a significant problem with coronary heart disease. They just don’t plug up their coronary heart vessels like humans do. Who knows, a better understanding of our pet’s apparent “immunity “ from coronary heart disease may someday help with the treatment, or better yet prevention, of human coronary heart disease.

When presented with a patient with heart disease your veterinarian uses several different tools to help characterize the type and severity of the problem. A good medical history and physical exam are the first and arguably the most important steps in correctly assessing these concerns. Symptoms of heart disease can be quite variable. Listlessness, poor appetite, exercise intolerance, labored breathing or coughing, full or distended appearing abdomen, are some common symptoms of cardiac disease. A good physical can help determine if these symptoms are related to heart disease or other non-cardiac problems. X-rays of the chest can help to assess the size and position of the cardiac structures while the electrocardiogram (ECG) is used to evaluate the rhythm and electrical activity of the heart. Over the past 2 decades the use of cardiac ultrasound (sonogram) in veterinary medicine has proven to be one of the most valuable technologies for heart disease assessment. This tool allows the clinician to “see” into the heart and evaluate, among other things, valve function, muscle wall thickness, and heart chamber size. If the

situation calls for it your veterinarian may suggest a referral to a veterinary cardiologist for more advanced evaluation.

Many treatment options exist for the heart problems seen in our pets. While not all heart conditions are treatable many can be controlled at a level that leaves the pet with a good to excellent quality of life. Veterinarians borrow a lot from the human cardiology field to help them treat dogs and cats with heart disease. For example many dogs have benefited from human pacemaker technology while others have even had open-heart surgery to correct defective heart valves. More commonly though, many drugs used for human cardiac patients are also used in dogs and cats with heart disease.

I find that many people believe that if their pet has heart disease that nothing can be done to help them. This may be true for some difficult cases but certainly not for all. With careful evaluation, diagnosis, and treatment many dogs and cats with heart problems can enjoy a normal lifestyle. No doubt "Spotty" would agree.

*Dr. John Huebner practices companion animal medicine at Redwood Veterinary Hospital in Vallejo, CA. You can send your pet health questions to Dr. Huebner in care of the Vallejo Times Herald, (440 Curtola Parkway, Vallejo CA. 94590) or e-mail him at RdWdVet@aol.com.*