Daisy Hill Animal Hospital, Ltd.
April 15, 2013

Ashland TIMES-GAZETTE

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Ask The Vet **series**

Early Detection of Chronic Kidney Disease is Imperative

We all hope our pets age gracefully and do not develop any significant illnesses late in life. Frequently, though, during physical exams and associated laboratory work, veterinarians do find evidence of existing disease.

These may be mild metabolic disturbances that can be corrected, but other times, more serious conditions are found. It is not surprising to find some evidence of kidney disease, or decreased kidney function in the aged pet, especially if the pet has developed some weight loss, increased thirst, increased urinations or loss of appetite.

Kidneys have several important functions that help to sustain life. The most important kidney function is to filter out and remove unwanted products of metabolism -- waste products.

As we digest foods, or naturally produce cellular by-products from normal metabolism, the kidneys do an outstanding job of removing these wastes from our bloodstream. When kidney function begins to falter, these wastes can build up to levels that cause both feelings of sickness and can lead to other whole-body illness.

Secondly, our pets' kidneys are vital to the balance of fluids within the body. Everyone knows failure to drink enough water results in dehydration. Similarly, if too much urine is produced by poorly functioning kidneys, dehydration is a risk. Healthy kidneys work through a complicated process to preserve most of the water in blood, while expelling wastes.

Commonly in aged or diseased kidneys, the progressive loss of ability to concentrate the urine, and thereby conserve body water, decreases. Rarely, acute kidney disease develops when even the basic ability to produce any urine is lost. This situation becomes life-threatening very quickly.

Outward symptoms of poor kidney function that may first be noticed include drinking more water, and increased urinations, which can lead to urinary accidents inside the home. This often becomes frustrating and difficult to manage. Another common disease that also has signs of increased thirst and urinations is diabetes. Luckily, with available blood and urine tests, it is easy to discern between the two.

And thirdly, the kidneys provide the primary monitoring for oxygen levels in the blood. If there is decreased oxygen throughout time, kidneys secrete a hormone that tells bone marrow to produce more red blood cells.

It should come as no surprise that if this important function of the kidneys is compromised, the result could be a lower amount of red blood cells circulating in the body. Given enough time, this can lead to anemia and complications of poor oxygenation of vital tissues.

Additionally, the buildup of metabolic waste in the blood can actually be toxic to red blood cells, shortening their life span -- not a healthy combination. Anemia is often suspected on physical exam if the pet's gums are not as pink as expected, or if past history includes some lethargy or weakness.

Chronic kidney disease often develops during months to years, and the ability to identify it early is extremely valuable. If identified in the late stages of the disease, treatment options become limited. By having routine lab work done, including blood and urine tests, your veterinarian's ability to identify an abnormality in kidney function, along with other numerous conditions, is significantly increased.

With chronic kidney disease, a trend of slowly increasing levels of the metabolic waste products and other vital metabolic elements are clues that kidney function is compromised.

Other conditions that possibly complicate kidney function include the presence of active dental disease and inflammatory or immune system illnesses. Some theories exist that dental disease by itself can be a primary cause of kidney function loss.

When infection or inflammation occurs within the kidney, actual physical damage to the kidney's filtering unit can lead to permanent loss of functionality. Proper, aggressive treatment of any dental disease throughout a pet's life is recommended to help reduce the risk of complications in the mouth and the rest of the body.

When chronic kidney disease is caught early, many treatment options are available to help support and preserve existing kidney function. Some diets have been shown to result in longer survival times and improved quality of life. Increasing the amount of water intake helps to prevent dehydration from developing and aids in decreasing the buildup of wastes in the blood. Also, supportive medications exist that can be tailored to an individual's needs.

The earlier kidney disease is identified, the better. But, the only way to catch it early is to look for it early before symptoms develop. When laboratory testing is found to be normal, a valuable baseline is established for comparison of future test results so trends associated with disease can be more easily identified.

As your pet ages, be sure to pay close attention to its drinking habits, urinations and appetite. To start monitoring your pet or if you currently have any concerns, a thorough physical exam with some basic laboratory testing is highly recommended.