



勝利動物醫院
Victory Animal Hospital

Victory Animal Hospital

Blk B, 1/F, Chung Yuen Mansion, 71b Waterloo Rd., Kln, Hong Kong

Phone: 852 2711 0332

Email: info@globavet.com

Kidney Failure – Chronic in Dogs

What do my dog's kidneys do?

The kidneys principally act to remove metabolic waste products from the blood stream, regulate the levels of certain essential nutrients such potassium and sodium, conserve water and produce urine.

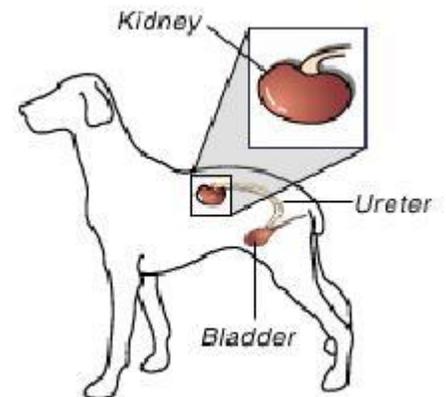
Many people think that "chronic kidney failure" or "chronic renal failure" means that the kidneys have stopped working and are not making urine. Fortunately, this is not the case. By definition, chronic renal failure (CRF) is the inability of the kidneys to efficiently filter the blood of its physiological waste products, not the inability to produce urine. Ironically, most dogs in kidney failure produce large quantities of urine, but the body's toxic wastes are not being effectively eliminated.

When do most cases of chronic kidney failure occur?

Since kidney tissue cannot regenerate if destroyed, the kidneys have a large amount of spare capacity to perform their various functions. At least 2/3 of the kidneys must be dysfunctional before any clinical signs are seen.

In many cases, this means that the destruction has been occurring for months to years (chronic) before failure has become evident.

In dogs, chronic kidney failure is associated with aging, and in simple terms can be considered to be "wearing out" of the kidney tissues. The age of onset is often related to the size of the dog. For most small dogs, the early signs of kidney failure occur at about ten to fourteen years of age. However, large dogs have a shorter life span and may undergo kidney failure as early as seven years of age.



What are the clinical signs of chronic kidney failure?

"Thus, one of the earliest clinical signs of kidney failure is increased water consumption and urination."

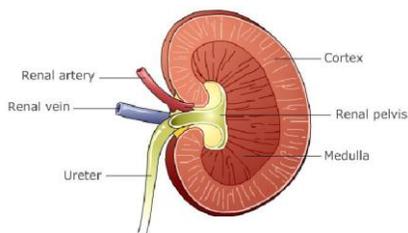
After approximately 2/3 of the kidney tissue is destroyed, there is a rapid rise in waste products in the bloodstream and an apparent sudden onset of severe disease. The clinical signs of more advanced kidney failure include loss of appetite, depression, vomiting, diarrhea, and very bad breath. Occasionally, ulcers will be found in the mouth.

How is chronic kidney failure diagnosed?

There are two basic tests for kidney function:

- 1) a complete urinalysis and
- 2) a blood biochemistry analysis.

A urinalysis is needed to evaluate kidney function. A low urine specific gravity (USpG) is the earliest indication of kidney failure. An increase in protein in the urine also indicates decreased kidney function.



A blood biochemistry analysis assesses the function of various internal organs. Measuring the level of two waste products in the blood, namely blood urea nitrogen (BUN) and blood creatinine (CREA), indicates decreased kidney function. Tests to measure the blood levels of other substances such as albumin, globulin, potassium, sodium, phosphorus and calcium, as well as the red and white blood cell counts are important in order to determine the extent of failure and the best course of treatment.

The treatment of CRF depends on the results of blood tests, and specific treatments are aimed at resolving specific abnormalities. In some cases, the kidneys are damaged beyond repair before diagnosis and medical treatment is ineffective. However, with early diagnosis and aggressive treatment, many dogs will live a normal lifestyle for many months or years.

Treatment usually occurs in two phases, first flushing the kidneys and removing the accumulated toxins from the blood, and then providing treatments to manage the disease and delay its progression.

If enough functional kidney cells remain, they may be able to adequately meet the body's needs for filtration and waste removal. Fluid therapy includes replacement of various electrolytes, especially potassium. Other important aspects of initial treatment include proper nutrition and drugs to control vomiting and diarrhea. Your dog will often begin to feel better soon after this stage of treatment is begun.

There are three possible outcomes from the first phase of treatment:

1. The kidneys will resume functioning and continue to function for a few weeks to a few years.
2. The kidneys will resume functioning during treatment but fail again as soon as treatment stops, usually within three to fourteen days.
3. Kidney function will not return.

Unfortunately, there are no reliable tests that will predict the outcome. Each case should be treated aggressively and monitored closely. Even dogs that have severe kidney failure may respond favorably to treatment and resume a normal quality of life after treatment.

The second phase of treatment is to help keep the kidneys functioning as long and normally as possible. This is usually accomplished with one or more of the following, depending on your pet's condition:

A special diet – Nutrition is one of the cornerstones in the effective treatment of dogs with chronic kidney failure. Your veterinarian will recommend the most appropriate diet, containing the necessary quantity and quality of nutrients for your dog.



A phosphate binder

Home fluid therapy – Once your dog is stabilized, you can give maintenance levels of fluids under the skin (subcutaneously) to your dog at home. This serves to prevent dehydration, helps continually flush toxins from the kidneys and provides additional levels of electrolytes.

A drug to regulate the parathyroid gland and calcium levels – if required

A drug to stimulate the bone marrow to produce new red blood cells

A drug to regulate blood pressure

The prognosis is quite variable depending on the dog's response to the initial stage of treatment and your ability to perform the follow-up care. Veterinarians encourage treatment in most situations because many dogs will respond well and maintain a good quality of life.

This client information sheet is based on material written by: Ernest Ward, DVM

© Copyright 2009 Lifelearn Inc. Used and/or modified with permission under license.