**Feline Specialties Veterinary Hospital 918-299-8222**

**Feline Chronic Renal Failure**

**Description of Chronic Renal Failure (CRF)**

Approximately 200,000 tiny structures (nephrons) in the kidneys eliminate waste products and regulate electrolytes in the body. CRF results when these nephrons begin to die off and waste products and electrolytes can no longer be processed effectively. The waste then accumulates in the cat’s body. In effect, a cat in CRF is being poisoned by the waste that the kidneys are unable to filter. Electrolyte imbalances, anemia, and blood pressure problems may occur as the kidneys deteriorate.

**The Kidneys**

The kidneys have five primary functions:

* Filtering waste products from the body (primarily urea and creatinine).
* Regulating electrolytes (potassium, calcium, phosphorus, and sodium).
* Producing erythropoietin, which stimulates the bone marrow to produce red blood cells.
* Producing renin, an enzyme that controls blood pressure.
* Producing and concentrating urine.

**Symptoms**

As the condition progresses you may see more or worsening of your cat’s symptoms. Not all cats will exhibit all of the symptoms listed.

* Excessive urination, increased thirst.
* Nausea and vomiting.
* Dehydration.
* Loss of appetite and weight loss.
* Lethargy and weakness.
* Poor hair coat.

Renal failure can either be acute or chronic. Chronic renal failure is a progressive, irreversible deterioration of kidney function. Because cats hide their illnesses and the very early signs of CRF are subtle, this disease may only be recognized when the patient reaches 70% loss of function. CRF is one of the leading causes of illness and death in older cats.

**What Causes CRF?**

CRF may have one or more causes, but most often a cause cannot be identified. In recent years, more attention has been directed towards high blood pressure, low potassium levels, and dental disease as possible contributors to the development of CRF. Although it can occur at any age, it is usually a disease of older cats.

The relationship between high blood pressure and the kidneys is complex. The kidneys play a crucial role in regulating blood pressure and they are also subject to damage from high blood pressure. Increased pressure can cause the nephrons to deteriorate more rapidly, thus accelerating the course of CRF.

**Diagnosis**

The only way to know for certain if your cat is suffering from CRF is to perform blood tests. These tests will determine the levels of BUN (blood urea nitrogen) and creatinine as well as evaluating electrolyte levels. An elevated creatinine is the most certain sign of loss of kidney function.

**Treatment**

There is no cure for CRF but the condition may be managed for a time. The cornerstone of CRF management is to control the amount of waste products that are sent through the kidneys. Since the remaining nephrons are limited in their ability to process waste, the idea is to reduce the amount of waste to a level that the nephrons can accomidate. This is done through a combination of diet, medication, and hydration therapy (diuresis).

Subcutaneous fluid therapy: These are fluids that are administered through a needle inserted under the cat’s skin. This will not repair the kidneys, but will help the remaining kidney tissue function as effectively as possible.

Diet: There are multiple prescription diets available for cats with CRF. These diets are lower in protein and higher in non-protein calories to provide nutritional needs while reducing the kidney workload.

Medications: Many cats with CRF have a decreased appetite due to nausea. Pepcid AC can be given to inhibit acid production and therefore increase appetite. There is also an appetite stimulant, called Mirtazapine, that will sometimes help maintain a better appetite.

**Prognosis**

CRF is a terminal disease. The only questions are how long and how well the patient will live until the end. With proper treatment, the cat may have from months to years of relatively high quality life.

Caring for a CRF cat takes a strong commitment from the caregivers. The progression of the disease has been compared to an emotional roller coaster ride by those who have gone through it. There will be up days and down days. As the cat’s caregiver, it is up to you to determine when the quality of life has decreased to a point at which prolonging life no longer has value. Your veterinarian can help you in making that decision.