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ERD Heska Test - a New Test to Detect Early Renal Disease

By now, regular readers of my website are aware of my obsession with feline chronic renal failure (CRF). The majority of cats eventually fall victim to this disorder; it is, in fact, the number 2 cause of death in pet cats. There have been many advances in the treatment of renal failure in cats over the past several years. Initially, our treatments were directed at making affected cats more comfortable while the disease inevitably progressed. More recently, we've discovered that by restricting dietary protein and phosphorus, maintaining normal potassium levels, and controlling high blood pressure, we may be able to slow the progression of the disease. With the exception of a kidney transplant, it is currently impossible to improve kidney function in cats with chronic renal failure.

The job of the kidneys is to filter the toxins out of the blood stream and put them in the urine. If the kidneys are unable to do this properly, the level of toxins in the blood stream will start to rise, and the urine will become more dilute. At my cat hospital, I recommend that all cats age 7 and older undergo a complete blood count, serum biochemistry panel, and complete urinalysis to make certain that all body systems, including the kidneys, are functioning properly. The earlier we can detect a problem, the better chance we have successfully treating or controlling it.

Blood and urine tests are a simple, non-invasive way to evaluate kidney function, however, there is a major disadvantage with these tests: they don't detect declining kidney function until the kidneys are significantly compromised. The first sign that the kidneys may be having a problem doing their job is the production of urine that is not as concentrated as it should be. Unfortunately, in dogs, this happens when about 66% of kidney function is compromised. Soon afterward, the level of kidney toxins in the circulation begins to rise. This happens in dogs when kidney function declines to a point where approximately 75% of kidney function is compromised. Similar principles apply to the cat. No one is exactly sure what triggers the onset of renal failure in cats. Once the process begins, however, it only gets progressively worse. Kidney infections, inflammation, trauma, genetic factors, immune disorders, etc. have all been shown to play a potential role in triggering the onset of renal failure, however, the inciting cause usually goes undetected, and by the time we detect kidney dysfunction (either because the cat is showing clinical signs of CRF, or through routine geriatric blood and urine tests), the damage has been done. At that point, even a kidney biopsy is unlikely to reveal the inciting cause. All we see is the resultant damage and scarring. It would be ideal if there were an accurate, convenient, and affordable way to detect renal dysfunction at a much earlier point, as this would allow earlier intervention and would significantly increase our ability to alter renal disease progression.

The kidneys are selective about what they filter out of the blood stream. Albumin is an essential protein that the kidneys normally do not let pass through the filter. When the kidneys aren't working quite right, however, small amounts of albumin escape through the filter and end up in the urine. Microalbuminuria (small amounts of albumin in the urine) has been shown to be an accurate predictor of impending renal disease in people with high blood pressure and diabetes. Several years ago, a number of studies suggested that detection of small levels of albumin in canine urine is also an early indicator of renal failure. In light of these findings, the Heska Corporation (Fort Collins, Colorado) developed and released their Canine E.R.D. HealthScreen, a 5-minute in-hospital test for the detection of microalbuminuria in dog urine.

Recent reports in reputable veterinary journals have clearly demonstrated that dogs with kidney failure that are fed low-protein, low-phosphorus prescription diets experience a slower progression of their kidney disease and lived significantly longer than dogs not fed these diets. An interesting finding in that study was that instituting the diet in dogs that were only mildly affected, i.e. earlier in the course of disease, was still beneficial. It stands to reason that if a new test can detect kidney disease at an even earlier stage than the commonly used tests, we might be able to look for and treat any underlying infectious or inflammatory diseases that could be triggering the kidney failure, and institute measures even earlier in the course of the disease, significantly altering the path and progression of the disease.

Fortunately, the E.R.D Healthscreen Urine Test is available for cats as well. It's a simple test that requires a small amount of urine. The test is performed in the clinic, with results available in less than 10 minutes. A positive test (i.e. albumin in the urine) indicates that something is "bothering" the kidneys, and a search should be performed to detect possible causes for microalbuminuria. High blood pressure, dental disease, chronic skin infections, and inflammatory bowel disease are a few common conditions that could lead to kidney inflammation and microalbuminuria. If a medical condition is identified, it should be treated, and the E.R.D. test repeated four weeks later. A normal result four weeks later suggests that the kidneys are no longer being irritated, presumably delaying the onset of renal damage in the future. By detecting kidney damage early and treating underlying causes if possible, we may be able to reduce the long-term impact of kidney disease and give our pet cats extra years of good quality life.