

RENAL DISEASE IN CANINES

Chronic renal disease appears in more than 20% of pet dogs, with the mortality rate of more than 5%, kidney disease is the second most common cause of death with Cancer being the first.

Kidneys are made up of tiny structures (glomerulus and tubule) called nephrons. These nephrons filter and cleanse the blood and remove waste products from the body. The kidneys help control sodium, potassium, chloride, bicarbonate, PH, Phosphate and magnesium. Eventually over time these nephrons break down and literally wear out, which is a natural part of aging. However sometimes the ageing process is artificially stimulated by environmental factors. Most premature ageing associated with kidney disease is either directly or indirectly associated with inappropriate and artificial nutrition.

There are generally 4 stages of renal disease;

- 1) Loss of Renal reserve – this phase has no clinical signs and therefore is difficult to detect.
- 2) Renal insufficiency is also difficult to diagnose, as clinical signs are hard to spot.
- 3) Azotemia – Signs become more apparent but may still go undetected.
- 4) Uremia – this phase is when all clinical signs are noticeable.

Chronic Renal Failure can occur in dogs of all ages but is more common in older dogs. In a study conducted at the university of California the average age of Azotemia onset was 11.34 years and progressed to death in a little less than two years.

Most Veterinary text will suggest putting affected dogs on lower protein diets. Some of these diets have less meat, more carbohydrates and high amounts of fiber. These texts are based on their belief that dogs are omnivores. This is a sad conclusion, as it does not address the real problem.

The oversight of dogs being carnivores has been disastrous. It isn't the amount of protein that is the problem but the TYPE of protein. Waste products such as vegetables, grains, carbohydrates and high amounts of fiber are what age the kidneys. Waste products are turned to nitrogenic waste, which is in turn is converted to urea and eliminated through the kidneys. The more waste, the harder the kidneys must work.

There are several other aspects of kidney disease such as acute renal failure, chronic interstitial nephritis, chronic progressive renal failure, congenital renal failure, familial nephropathy, glomerular capillary hypertension, Glomerular hyperfiltration, glomerulopathy, hypertension, metabolic acidosis, nephrocalcinosis, proteinuria, renal osteodystrophy, renal secondary hyperparathyroidism and uremia/uremic syndrome are the most common terms used in kidney disease.

Glomerular Diseases are those that attack the blood filtering system of the kidneys. Diabetes and hypertension are two leading diseases that cause damage to the glomeruli. This type of disease causes more cases of chronic kidney failure than any other. Often Glomerular disease is triggered by an abnormal reaction of the immune system. The body turns on itself and mistakes the kidney as a foreign object and launches an attack. These attacks may also be triggered after an infection such as staph, strep, or other bacterial type infection.

Interstitial Nephritis – Apparently the most common form of kidney disease in the dog. Acute interstitial Nephritis is commonly caused by the *Leptospira* species and is bacterial or viral in nature. This is a life threatening disease and must be diagnosed and treated rapidly to avoid death. Clinical signs are anorexia, pain, dehydration, increased thirst, vomiting, fever, discomfort and pain over the lumbar region with decreased amounts of urine.

Pyelonephritis – This disease, which is almost entirely associated with bitches, is caused by the bacteria *Corynebacteria renale*. This organism attaches itself in the pelvis area of the kidney. Common signs of this disease are the presence of pus and blood in the urine. It is not uncommon to have cystitis as a precursor.

Nephroses – This is the degeneration and eventual necrosis of the tubules part of the kidney. This type of kidney disease is generally connected to toxic and chemical damage from poisons both environmental and infectious. Clinical signs are decreased urine output from blocked kidneys; there may be a complete blockage of urine.

Urolithiasis – stone formation. This type of disease is generally acute and is most common in male dogs.

To slow the progression of kidney disease especially that of Chronic Renal Failure the animal should be given a species appropriate diet. Fresh raw meat of various protein sources with adequate amounts of bones and organ meats will naturally supply and regulate phosphates, sodium, PH and all the other minerals and vitamins needed to keep the kidneys healthy.

If the sick animal is just coming off a kibble diet the addition of herbals can help cleanse and strengthen the endocrine system and help the kidneys function normally.

Remedies useful in treating various forms and types of kidney/bladder disease are:

Chelidonium, Berberis, Cantharis, Phosphorus, Apis, Arsen alb, Aconitum, Cannabis sat, Colchicum to name a few.

Herbs – Uva ursi, pao d'arco, barberry, nettle, Urtica urens, are some examples.

Each individual needs to be assessed based on their own symptom picture and personality and should be treated specific to his/her needs. Please note that fear type aggression can be an early sign of kidney damage/disease.

Stay tuned for natural remedies for acute disease, emergency protocols, natural de-wormers, parasite repellents, immune boosters, detoxifying herbs, and chronic disease in the future issues.

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