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A RETROSPECTIVE STUDY ON NECROPSY FINDINGS IN DOGS WITH RENAL DISEASE

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Chronic renal failure (CRF), the end result of chronic renal disease, is usually irreversible and involves progressive loss of more than 70-80% of functional nephrons.

We analysed necropsy findings of 23 chronic renal failure cases of dogs reported to the Division of Veterinary Pathology from 2009 to 2012 with the objective of determining the gross and histopathological lesions (renal and extra-renal) associated with CRF.

The mean age (\pm standard deviation) of the affected dogs was 5.7 ± 1.2 years. Fifteen animals (65.2%) were males. Eight (34.7%) were crossbred while the rest comprised other breeds. Gross renal pathology included irregular cortical surfaces (100%), firm consistency of kidneys (100%), pale kidneys (78.2%) and reduced cortical width (34.7%). Histopathological examination of the 23 kidneys revealed moderate (57.14%) to severe (42.86%) interstitial fibrosis, compensatory tubular hypertrophy (61%), tubular atrophy (30%) and glomerular sclerosis (4.6%). An inflammatory cell infiltrate predominantly composed of lymphocytes was evident in 90.47% cases while the major cell types were neutrophils and macrophages in 8.69% cases. The kidney lesions were morphologically diagnosed as chronic generalised interstitial nephritis (n=19) and pyelonephritis (n=2). The extra-renal lesions observed were pulmonary oedema (100%), ulcerative haemorrhagic gastritis (60.8%), soft tissue mineralisation (39.1%), fibrinous pericarditis (26%) and fibrous osteodystrophy (4.3%). The most common conditions associated with CRF were chronic cystitis (13.8%), prostatitis (8.6%), suppurative cystitis (4.3%), pyometra (8.6%), transitional cell carcinoma (4.3%), and hydronephrosis (4.3%).

Although this study could not identify the specific aetiological agents responsible for CRF, the spectrum of the lesions encountered suggest a multifactorial aetiology.