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Title of thesis: Clinical, radiographic, ultrasonographic and laboratory findings of kidney in cats with urinary system disorders

Summary:

Renal and urinary tract diseases are prevalent issues in cats, which can lead to renal failure and diminished quality of life. Early and accurate diagnosis of these diseases, facilitated by clinical, laboratory, and imaging evaluations, plays a crucial role in their management. This study was conducted to investigate the clinical features, laboratory findings, and imaging changes in cats presenting with urinary symptoms. A total of 25 cats were examined, of which 92% were male. The most common symptoms in the studied cats were stranguria and pollakiuria. From a laboratory perspective, elevated urea was observed in 52% of cases, and elevated creatinine in 64% of cases, with a significant correlation between these two parameters. The only environmental factor associated with disease severity and renal involvement, based on creatinine levels, was access to the outdoors. In imaging, radiography was more effective for identifying changes in the bladder and urethra, whereas ultrasonography demonstrated superior capability in detecting renal changes, including increased echogenicity, pelvic dilation, renal cysts, the degree of differentiation between the renal cortex and medulla, and comparative echogenicity relative to the liver and spleen. A significant difference was observed in kidney sizes between the two imaging methods, and increased cortical echogenicity was associated with higher stages of chronic kidney disease. Overall, the concurrent use of clinical, laboratory, and imaging evaluations, particularly ultrasonography, holds significant importance in the diagnosis and monitoring of renal and urinary diseases in cats. Screening of susceptible breeds and controlling access to the outdoors can contribute to preventing and reducing the progression of these diseases and renal involvements in cats.

Key words: Cat, Kidney, Radiology, Ultrasonography, Urinary system