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Abstract

/LNH KXPdq srsxodwlrqv GRJV OLIVSDQV KDyH VLJQL FDQW LQFUHDVHG
 dog has been mentioned by a number of authors as an appropriate animal model for geropathology translational
 UHVHduFK 7KLv VWXG REMHFWLYH LV WR HYDOXDWH DJH UHODWHG PRUELGWLW
 IHPDOHV WKDW XQGHUZHqw QHFURSV 7KH UHSURGXFwLYH FDUGLRYDVFXODU
 JODQG LQ IHPDOHV ZHUH WKH RUJDQLF V\vwHPV VKRZLQJ WKH KLJKHVW IUHTXHQR
 PRUH OLNHO WR KDyH FDUGLRYDVFXODU DQG XULQDU GLVHdVH WKDQ IHPDOHV
 6PDoO EUHG GRJV ZHUH PRUH OLNHO WR KDyH XULQDU GLVHdVH EXW ODUJH
 SHULWRQHXP DQG PDoH JHQLWDo PRUELGWLWLHV 7KHVH HOGHUO GRJV ZHUH FRPP
 OHVLRQV 1HRSODVLD ZDV WKH SULPDU IDFWRU LQ RYHU KDOI RI DoO GHdWKV P
 DQG FDUGLRYDVFXODU SDWKRORJ KDyH ERWK EHFRPH FRPPRQ FDXVHV RI GHdW
 FROOHFWHG IRU WKH KXPdq VSHFLHV VKRZLQJ WKDW FDUGLRYDVFXODU SDWKR
 FDXVHV RI GHdWK LQ WKH HOGHUO 2XU QGLQJV FRQUP WKH GRPHVWLF GRJ
 UHVHduFK WKDW VDWLV HV WKH 2QH +HDOWK SULQFLSOH

*Corresponding author: 'U 'LDV 3HUHLUD ,QVWLWXWH RI %LR 6DOD]DU 8QLYHUVLW\ RI 3RUWR ,&%\$ 83 3RUWR com

Received: -DQ 0DQXVFULSW 1R EdwYR Signed: -DQ 3UH4 & 1R MYPK Reviewed: 34 -DQ 4 & 1R MYR Revised: -DQ 0DQXVFULSW 1R EdwYR

Morbidity

The reproductive system was the organic system in our investigation with the highest number of morbidities. 72.7% of intact men (56/77) and 61.3% of intact females (19/31) both had genital lesions. Cardiovascular and urinary system lesions were both very common, occurring in 45.7% and 44.2% of the animals, respectively. 34.6% of the ladies enrolled in this study had mammary lesions. In 31.7% and 28.3% of the animals, abnormalities in the liver and digestive system, respectively, were discovered. Conversely, pancreatic and neurological lesions, which were found in 6.8 and 3.4% of the animals, respectively, were the least common in this population. As seen in the graph, the genital tract—where lesions were found in nearly 73% of non-castrated male dogs—presented the most lesions in males, followed by the cardiovascular and urinary systems, where injuries were found in 52.7 and 51.9% of males, respectively. The urinary tract, cardiovascular, and mammary gland in females were the organic systems with the greatest number of alterations, with lesions recorded in 39.7, 36, and 34.6% of the animals, respectively. Males were substantially more likely than females to have pathogenic abnormalities to their urinary and cardiovascular systems ($p = 0.006$ and $p = 0.046$, respectively). Most lesions were seen in the urinary, cardiovascular, and male reproductive systems, both in dogs under 20 kg and above 20 kg. Small breeds showed a considerably greater incidence of urinary tract lesions ($p = 0.003$), whereas large breed dogs (> 20 kg) had a higher prevalence of pathology in the male reproductive system and in the peritoneum ($p = 0.048$ and $p = 0.001$, respectively). In addition, lesions of the haematological system were more common in giant dogs than in small breed dogs, albeit these differences were not statistically significant ($p = 0.058$ and $p = 0.055$, respectively). Males with intact reproductive tracts most frequently had testicular neoplasms and prostatic hyperplasia, which together accounted for 97.4 and 89.2% of the lesions diagnosed there. Leiomyomas and cystic endometrial hyperplasia each accounted for 33.3% of the uterine/vaginal lesions in non-neutered females, while polycystic ovaries made up 91.7% of the lesions observed in intact female ovaries. All mammary lesions recorded in this canine population were neoplastic lesions, with 51.1% of them being benign neoplasms and 48.9% of them being diagnosed histologically as malignant. Chronic kidney disease, which is characterised by renal atrophy, an irregular outline, and capsular adhesions, as well as a histological picture of the renal outline, and capsular adhesions, occurring in 45.7% ($p = 0.055$),