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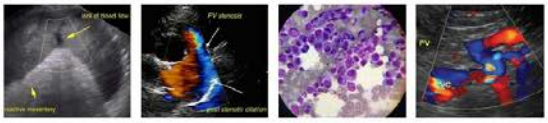

IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT

Sophie Neilson

SPECIES

Canine

BREED

Chihuahua X

SEX

Spayed Female

AGE

13 Years

WEIGHT

5.9 kg

INTERPRETED BY

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

IMAGING PERFORMED BY

Loetitia Saint-Jacques, LVT

HOSPITAL NAME

Dr. Neilson House Call

REFERRING VET

Dr. Sarah Neilson

INVOICE

44907

DATE

8/23/23

PRESENTING CLINICAL SIGNS

Not sedated-Housecall visit-- vocalize which pushed abdomen out during scan- 4/6, systolic heart murmur- Working diagnosis hypertension - secondary retinal detachment, hyphema. Good appetite, no PU/PD, normal BMs, sleeps a lot but has periods of alertness/activity, sneezes frequently, no vomiting/coughing/diarrhea. Problem List - blind - hyphema R eye, retinal detachment R eye - started late May 2023; recently developed glaucoma R eye (August 2023) - murmur systolic grade 4/6 - chronic sneezing - dental disease - mild proprioceptive deficits/weakness PL's Mid to late May a small amount of hyphema was noted in Sophie's R eye. My initial examination included an ophthalmic exam, IOP, and ultrasound of the globe. IOP was normal at that time, and u/s was suspicious for retinal detachment. May 25, 2023 blood pressure measured at home (cardell max). All measurements were less than 147 systolic. May 30, 2023 - Animal Eye Center appt confirmed retinal detachment R eye, with retinal hemorrhages in L eye also noted. Blood pressure measured by doppler was 190 systolic. P is very stressed by car travel. Amlodipine 0.065 mg PO SID, flurbiprofen OD BID were started. Recheck blood pressure was performed at home June 21, 2023 using a Sun Tech oscillometric monitor. While doppler is ideal, it was felt the impact of car travel stress outweighed the benefit of doppler vs oscillometric measurement of BP and I could not locate a mobile practitioner in my area with a doppler unit for measuring BP. During measurement P was a bit shifty and uncooperative as she does not like limbs/feet to be manipulated. The highest reading in this session was the first reading and was 191/156 (166) HR 98. The 3 other highest readings also agreed most closely with heart rate and were 164/128 (140) HR 106; 150/97 (116) HR 103; 104/93 (95) HR 110. Amlodipine was increased to 1.25 mg PO SID. Recheck Blood Pressure on July 1, 2023 using same Sun Tech monitor were 142/125 (129) HR 110; 172/156 (159) HR 91; 132/79 (105) HR 98; 128/42 (73) HR 92. At recheck on August 8, 2023 IOP was elevated in the RIGHT eye and medical treatment of glaucoma was started (see below). **********Current medications Amlodipine 1.25 mg PO SID Dorzolamide 1 drop RIGHT eye 3x daily Ketorolac ophthalmic - 1 drop RIGHT eye 2x daily Pred acetate - 1 drop RIGHT eye 2x daily Intent of ECHO- investigate LA size to see if initiation of pimobendan would be indicated and as pre-ax screen for dental COHAT or other surgical procedures (enucleation is being considered) Intent of AUS - to r/o underlying causes of hypertension and neoplasia
Abnormal PE/Chem/CBC/UA Results: LABSattached as well- Na/K ratio 27, BUN 35, Glob 4.1 , ALP 972, Urine Protein 3+

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The left kidney has a normal shape and size (4.79 cm) with numerous small cortical cysts. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (5.14 cm) with numerous small cortical cysts. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

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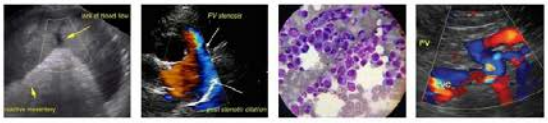

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Adrenal Glands

The left adrenal gland is normal in size measuring 0.66 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.58 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There is a 0.62 cm cystic structure visualized within the parenchyma and a hypoechoic nodule visualized in the caudate lobe measuring 1.59 cm in diameter.

The gall bladder lumen is significantly distended. Some areas of the wall appear mildly thickened with adherent debris. There is a large amount of primarily non-organized echogenic debris. There is no evidence of bile duct dilation.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measures 0.40 cm. Jejunum wall measures 0.29 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

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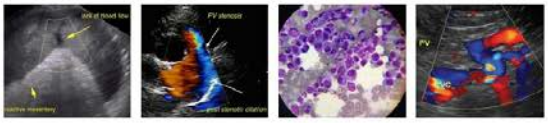

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Other

There is a hypoechoic cystic structure visualized near the left kidney measuring 1.57 cm x 0.77 cm, most consistent with an omental cyst.

ULTRASONOGRAPHIC FINDINGS

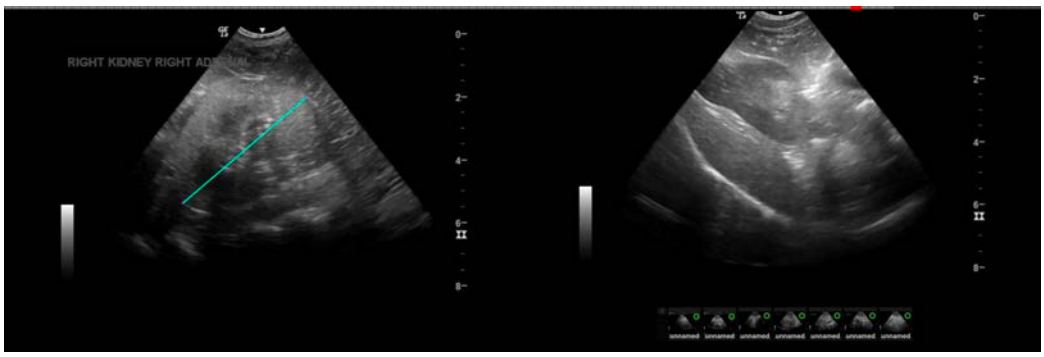
- Decreased corticomedullary distinction in both kidneys with small cortical cysts – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.
- Heterogeneous liver with a small cystic structure and a hypoechoic nodule – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. The cystic structure is most consistent with a benign hepatic cyst. The hypoechoic nodule is of unknown significance and could represent a benign or neoplastic process.
- Large gallbladder debris – A large amount of debris is evident in the gall bladder with no evidence of a mucocele or associated inflammation at this time. This could represent an early mucocele or cholestasis, with minimal evidence of associated inflammation at this time. Continued monitoring of labwork and ultrasound are warranted for progression of this lesion. Ursodiol therapy could be considered.
- Cystic structure visualized near the left kidney – Findings are most consistent with an omental cyst. This is likely a benign process. Recommend continued monitoring.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Both kidneys are hyperechoic with decreased corticomedullary distinction and small cortical cysts. These changes are consistent with chronic progressive age related renal disease, and this could be a source for the hypertension observed.

There is a hypoechoic nodule visualized dorsal on the right side of the liver near the caudate lobe. The significance of this is unclear. This could represent a benign or neoplastic lesion. Sampling in this area would be very challenging. A contrast CT scan could be considered to further evaluate. Otherwise, continued monitoring with ultrasound is an alternative.

There is a large amount of debris visualized in the gallbladder. Recommend starting chronic Ursodiol therapy and continued monitoring of the gallbladder for possible progression into a mucocele or cholecystitis.



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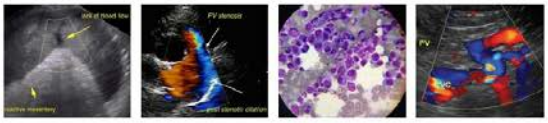

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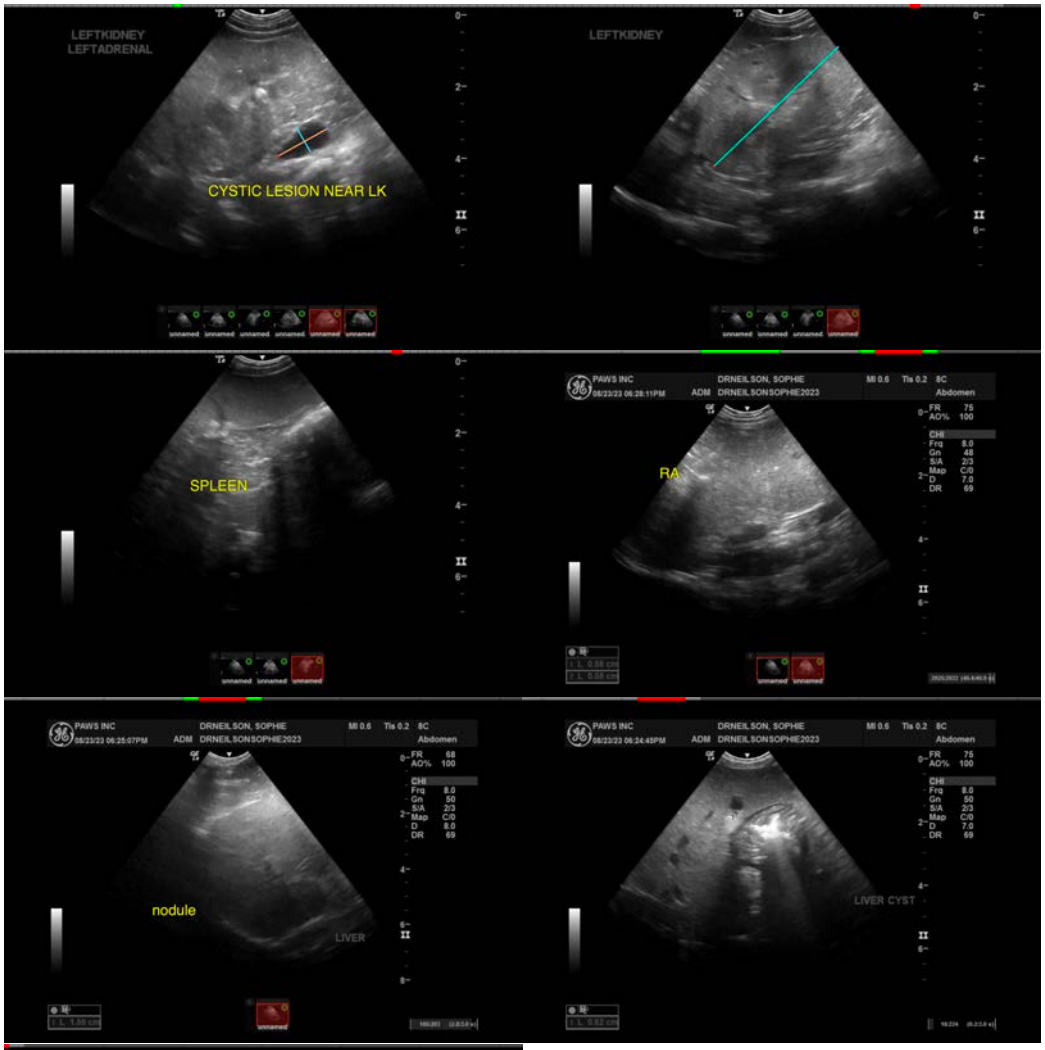

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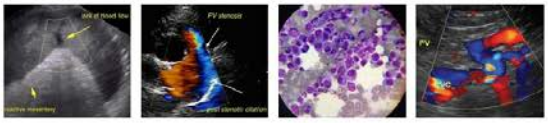

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

info@sonopath.com