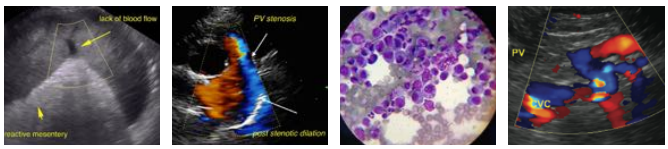
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Parce Londono

SPECIES
Canine

BREED
Beagle

SEX
Neutered male

AGE
15 years

WEIGHT
30.5 lbs

INTERPRETED BY
Dr Brittany Sinclair, BVSc(hons), DACVECC

IMAGING PERFORMED BY
Dr. Guiliani

HOSPITAL NAME
The Pet Hospital of Strattford

REFERRING VET
Dr. Guiliani

INVOICE
43273

DATE
3/6/23

PRESENTING CLINICAL SIGNS

History: polyphagia, PU/PD
Abnormal PE/Chem/CBC/UA Results: increased liver values and dilute urine 3/1/23 - newly ausculted heart murmur 1-2/6

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and visible pelvic urethra were of normal thickness. The ureters were not visible which is normal. There was normal wall layering with no masses, uroliths or abnormal thickening visualized. Urine was anechoic. No evidence of inflammatory or neoplastic changes were noted.

The kidneys have a smooth capsule and with hazing of corticomedullary definition to the point of inability to determine cortical/medullary ratio. No evidence of pelvic dilation was present. In left kidney there is a spherical anechoic fluid accumulation consistent with cortical cyst and both kidneys contain pinpoint areas of cortical mineralization. The left kidney measured 5.22 cm and the right kidney measured 5.49 cm.

Adrenal Glands

Left adrenal caudal pole gland is enlarged and hyperechoic measuring 1.2cm. The entirety of the gland is not visualized in this study. The capsule is smooth and no tissues appears to be invading surrounding vasculature. The left adrenal gland measured 1.2 cm at the caudal pole.

Spleen

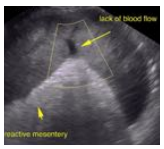
The spleen was normal with a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma and smooth capsule, with normal splenic vasculature with no signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarct changes were noted.

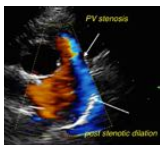
Liver

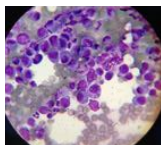
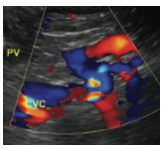
The liver is subjectively enlarged slight rounding of lobes and the parenchyma is hyperechoic to coarse with a few focal variably hypoechoic nodules. No specific masses are visualized. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of 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. Visualized peristalsis appears appropriate.





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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 base and limbs of the pancreas were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour and parenchyma were normal. No overt evidence of active inflammatory or neoplastic disease was noted.

Lymph Nodes

No clinically significant lymphadenopathy or abnormalities noted.

Free Abdomen

No masses or free fluid were noted.

ULTRASONOGRAPHIC FINDINGS

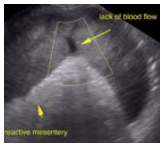
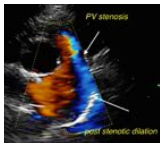
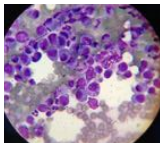
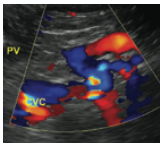
Primary Findings

1. Hepatomegaly with focal nodules
2. Left adrenal gland mass

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Liver changes are a common benign age related change, but infiltrative disease (lymphoma, MCT, other) cannot be definitively ruled out. Nodules may represent reactive, regenerative or inflammatory nodules, or less likely early neoplastic change. Vacuolar degeneration is a possibility and is a common nonspecific indicator of hepatocyte injury which is most commonly secondary to exogenous steroid exposure, hyperadrenocorticism, or an idiopathic age related change, though other endocrinopathy (hypothyroidism), infectious or inflammatory hepatitis (bacterial, viral, auto-immune other), and neoplasia among other things remain possibilities. In the face of elevated liver enzymes, fine needle aspirate is recommended to further characterize parenchymal changes, and bile acid profile to assess liver function, especially if any weight loss is noted or for baseline cytological assessment. Ultimately liver biopsy is often required for more definitive diagnosis. Empiric treatments (SAM-E, milk thistle, Vitamin E, ursodiol if bilirubin elevated or gall bladder sludge) could be tried and liver enzymes re-evaluated, especially if liver FNA does not show significant pathology before more invasive liver sampling is pursued.

Left adrenal gland enlargement is most consistent with adrenal mass which may be malignant or benign. It appears subjectively resectable with capsular expansion without obvious capsular escape or vascular invasion. Right adrenal gland was not definitively visualized in this study and another attempt to visualize the adrenal under heavy sedation could be considered to further investigate for the possibility of bilateral disease, which may change the diagnostic/treatment approach. If adrenal glands are bilaterally enlarged, pituitary dependent hyperadrenocorticism is most likely. Low dose dexamethasone

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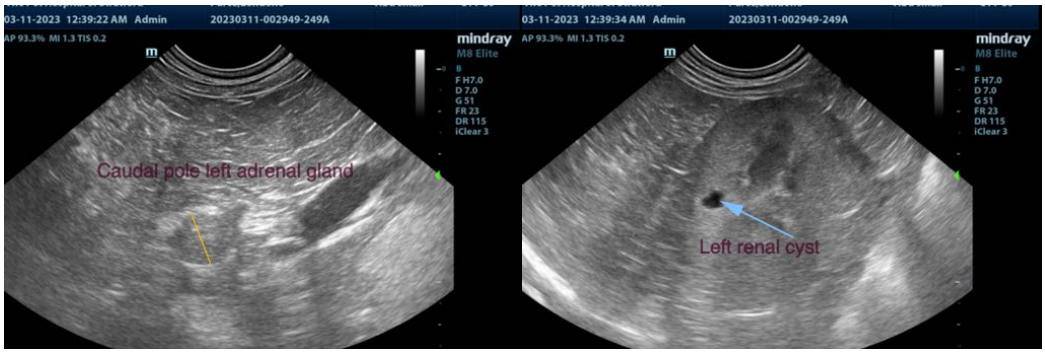
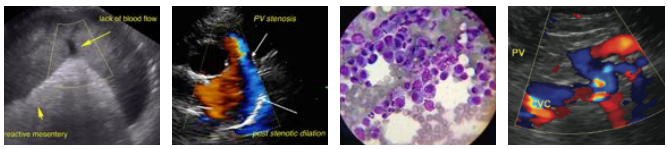
suppression test may be of use to non-invasively further investigate this possibility as it has the potential to both diagnose hyperadrenocorticism and differentiate between adrenal and pituitary dependent disease. Abdominal CT may be of use for further evaluation of the glands and is recommended along with thoracic CT for metastasis if surgical removal is pursued. Differentials owing to sonographic architecture and clinical history include carcinoma, pheochromocytoma, adenoma, hyperplasia, cortisol secreting tumor, myelolipoma less likely. I recommend urine catecholamine screen (available through Marshfield labs) for pheochromocytoma detection if surgical removal is pursued as pre-surgical treatment of pheochromocytoma is essential. It is possible to have both cortisol and catecholamine secretion from the same adrenal tumor so presence of hypercortisolemia does not obviate the need for presurgical urine metanephrine screening.



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



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can be of any further assistance please contact me.

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