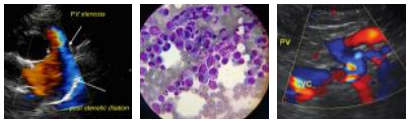
IMAGING PERFORMED BY

IntraPet.com



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DATE

5/6/22

PATIENT

Arthur Naylor-Howley

SPECIES

Canine

BREED

Mix

SEX

Neutered Male

AGE

11/3/11

WEIGHT

34.2 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Andi Parkinson RDMS

HOSPITAL NAME

Timonium AH

REFERRING VET

Dr. Brand

INVOICE

37484

PRESENTING CLINICAL SIGNS

Weight loss despite eating the same amount. Down 7lbs since 9/7/21.

Current Medications: None.
Lab Results: SDMA 28, Creat 1.2, BUN 46, T4 0.8.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

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 prostate is normal in size (1.13 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (5.12 cm) with moderate sized non-obstructive nephroliths. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of 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 (5.43 cm) with non-obstructive nephroliths. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 1.17 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 large in size measuring 0.89 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 large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. There is a small 0.70 cm hyperechoic nodule visualized within the parenchyma near the gallbladder.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a large amount of non-organized echogenic debris, but there is also at least 1/3 to ½ of the gallbladder that is developing into a mucocele with a thickened wall measuring

approximately 1.2 cm and some intraluminal mineralization. The cystic and common bile ducts are normal/not visible.

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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) 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.

ULTRASONOGRAPHIC FINDINGS

- Decreased corticomedullary distinction in both kidneys with moderate sized non-obstructive nephroliths – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.

- Bilateral adrenomegaly – The bilateral adrenomegaly could be consistent with bilateral hyperplasia (e.g., secondary to pituitary-dependent hyperadrenocorticism), bilateral infiltrative neoplasia, inflammatory adrenal disease, other. Correlation with clinical findings is recommended.

- Large, heterogeneous liver with small, hyperechoic 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 appearance of the hyperechoic nodule trends towards a benign process. Recommend continued monitoring.

- Developing gallbladder mucocele – The gallbladder is approximately 50% mucocele at this time with a thickened wall and mineralization. No significant surrounding inflammation is noted.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Based on the appearance of today's scan, I would suspect this pet could have pituitary dependent hyperadrenocortism. Correlate with bloodwork findings and clinical signs. If there are no symptoms consistent with Cushing's and no elevation of liver enzymes, I would like just continue to monitor the situation. Additionally, the gallbladder is developing into a mucocele. If liver enzyme values are normal, this

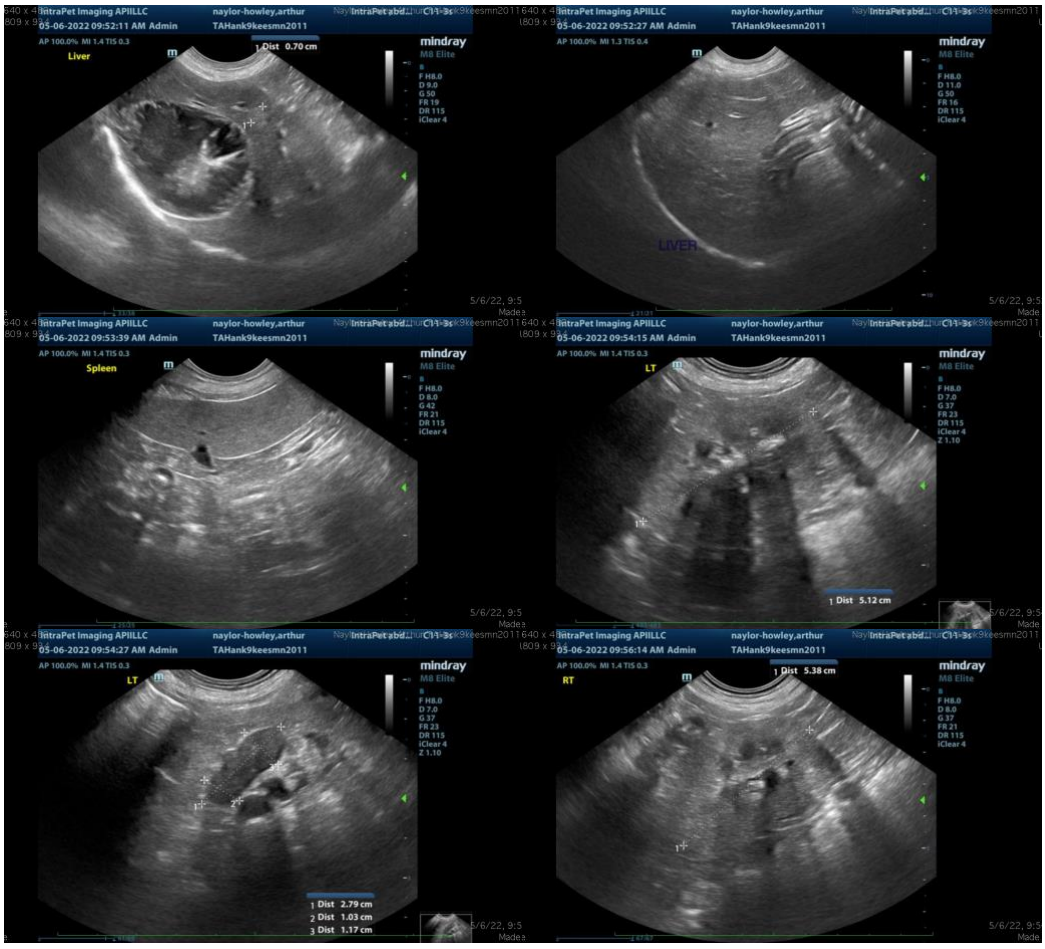
is atypical for a clinical mucocele, as most commonly it would cause abdominal pain, decreased appetite, nausea, etc., so it is possible there is another process responsible for the clinical signs reported or that the typical anorexia, etc. is being masked by possible Cushing's disease (?).

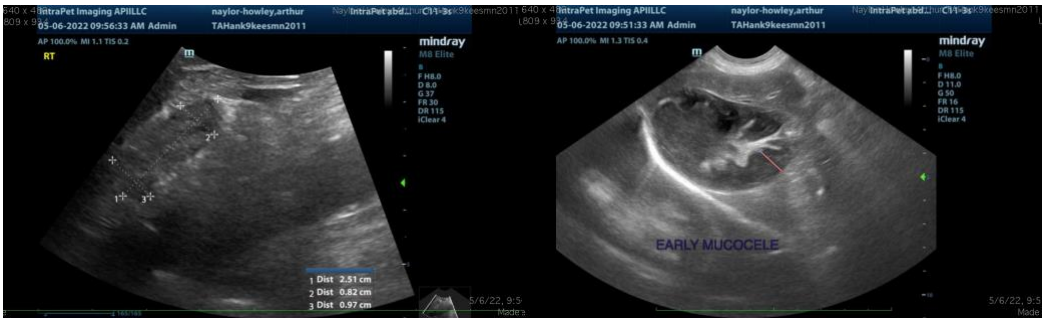
The changes observed in the kidneys are consistent with chronic progressive renal disease. Recommend a urinalysis, culture, blood pressure evaluation, and urine protein to creatinine ratio for a baseline.

Options moving forward would include either evaluation for surgical cholecystectomy, if gallbladder disease is thought very likely based on the symptoms described, or alternately you could consider Ursodiol and a course of antibiotics with very close monitoring of the gallbladder for progression. Also take note of any elevation in white blood cell count, abdominal pain, etc.

Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.

If there is concern for malabsorption or GI disease contributing to the weight loss, you could consider a GI panel to Texas A&M for a qualitative PLI, TLI, cobalamin and folate to look for additional evidence of small intestinal disease. If this was the case, GI biopsies could be obtained at the time of gallbladder removal.





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.

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