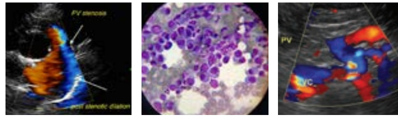


DATE

6/1/22

PATIENT

Walli Cathcart

SPECIES

Canine

BREED

Lhasa Apso X

SEX

Neutered Male

AGE

7/12/09

WEIGHT

19.4 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Andi Parkinson RDMS

HOSPITAL NAME

Taylorsville Vet Clinic

REFERRING VET

Dr. Lucas

INVOICE

38149

PRESENTING CLINICAL SIGNS

Current Medications: Benazapril HCl 5mg ½ SID.
Lab Results: UPC is relatively stable on Benazapril, however liver enzymes have increased significantly. ALP and now ALT.
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, or masses. There is a small string of dependent shadowing mineralized debris in the urinary bladder, most consistent with sandy debris or small stones.

The prostate is normal in size (0.65 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. There is a small mineralized structure visualized in the region of the prostate, most consistent with a small stone in the prostatic urethra. There is no evidence of a mass effect.

The left kidney has a normal shape and size (4.03 cm) with too numerous to count, large, shadowing, 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, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (6.81 cm) with numerous moderately sized non-obstructive nephroliths and a large renal cyst visualized measuring 2.0 cm in diameter. 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, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is large in size measuring 7.6 cm at the cranial pole, 1.2 cm at the caudal pole, and 2.4 cm in length. It is observed in its normal position cranial to the left renal artery. It is irregular in appearance in that it is "chunky" and irregular in shape, most consistent with an enlarged adrenal gland.

The right adrenal gland is large in size measuring 1.29 cm in width at the caudal pole and 1.67 cm in length. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is irregular in appearance in that it is somewhat "chunky" and enlarged.

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. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

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 moderate amount of non-organized echogenic debris. 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

- Dependent mineralized debris visualized within the urinary bladder – most consistent with cystic calculi or sandy debris. Correlate with abdominal radiographs.

- Pinpoint foci in the region of the prostate – most consistent with a small stone/sandy debris within the prostatic urethra.

- Decreased corticomedullary distinction in both kidneys with numerous moderate to large sized nephroliths and a right-sided renal cyst – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. The hyperechoic mineralized foci observed at the corticomedullary junction of the left/right kidney are consistent with small, non-obstructive nephroliths.

- Large, heterogeneous liver – 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.

- Moderate gallbladder debris – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

- Bilateral adrenomegaly – Both adrenal glands are large, atypical and irregular. Findings are most consistent with bilateral hyperplasia, but metastasis to the adrenals or bilateral adrenal masses are

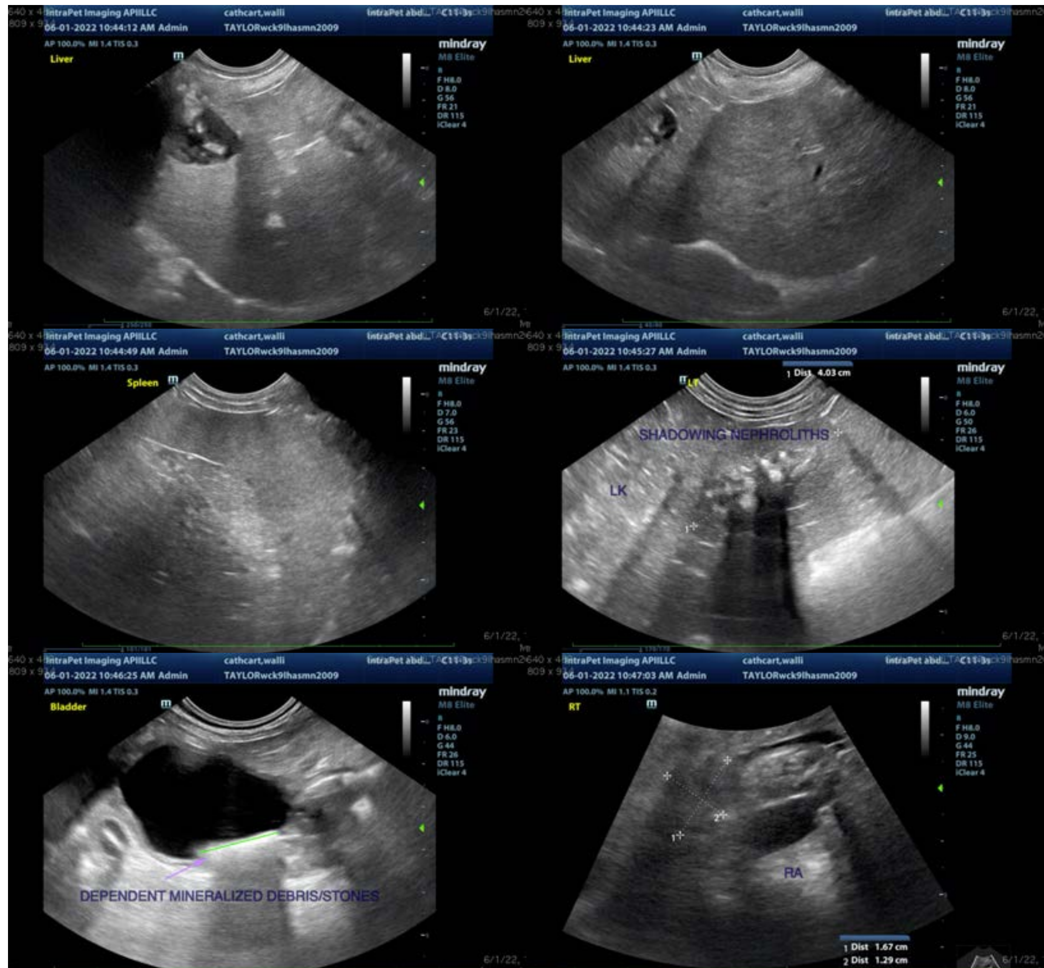
possible.

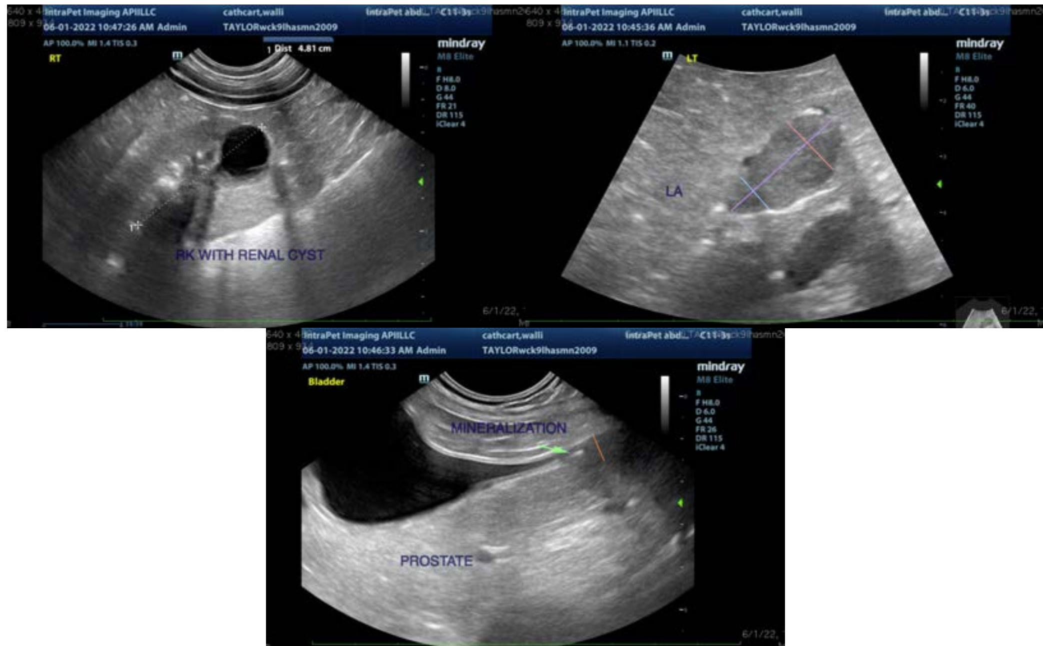
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The adrenal glands are very abnormal. They are large and somewhat nodular in appearance. I suspect this is bilateral hyperplasia due to PDH, but other differentials such as bilateral metastatic lesions and bilateral adrenal masses are also possible. If symptoms of Cushing's are present, then recommend adrenal function testing and medical management for PDH.

There is a moderate amount of sandy debris/small stones within the urinary bladder. I suspect there is a small stone in the prostatic urethra. Correlate these findings with abdominal radiographs to determine the number and size of the stones present. Additionally, you may be able to determine if the mineralization can be retropulsed back into the urinary bladder with a urinary catheter, or if it is intraparenchymal mineralization. There are numerous nephroliths visualized in both kidneys, and corticomedullary distinction is greatly reduced. Findings are consistent with chronic progressive renal disease and nephrolithiasis. Recommend blood pressure, urinalysis and culture, and continued monitoring for evidence of an obstructive stone.

The changes observed in the liver are most likely consistent with a vacuolar/steroid hepatopathy.





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)
kathleen.sennello@sonopath.com