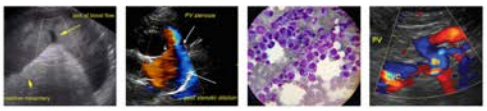


PATIENT

Cyd DiChiara

SPECIES

Canine

BREED

Boxer X

SEX

Neutered Male

AGE

13 Years 5 Months

WEIGHT

63.2 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Pamela Harrigan, RDCS

HOSPITAL NAME

Anchor AH

REFERRING VET

Dr. Katherine Pietsch

INVOICE

43817

DATE

7/6/23

PRESENTING CLINICAL SIGNS

Patient started to have heavy breathing 10 days ago. He has had a change to his bark but does not have raspy breathing. He has been PU/PD for months. Patient was tachypnea on examination. No crackles or wheezing. He has also been eating more slowly per owner. Patient is overweight and has a potbelly appearance. Patient has ALT 563, ALP 4621. R/O CCS, liver disease, neoplasia, pancreatitis other. On Enrofloxacin 136mg 1 1/2 tab PO SID, Amoxicillin 500mg 1 cap PO BID, Ondansetron 8mg 1 tab PO TID, Cerenia 60mg 1 tab PO SID, Denamarin Advanced, Gabapentin 100mg: 2 cap PO TID.

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 (0.78 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 (7.53 cm) with mild pyelectasia at 0.45 cm and a large cortical cyst in the caudal pole measuring 1.71 cm x 1.93 cm. 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 (6.26 cm). 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.

Adrenal Glands

The left adrenal gland is large and irregular, measuring 1.21 cm at the cranial pole, 1.12 cm at the caudal pole, and 2.76 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 heterogeneous and the margins are somewhat irregular. No evidence of vascular invasion is visualized.

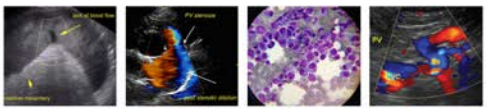
The right adrenal gland is large and irregular, measuring 0.93 cm at the cranial pole, 0.78 cm at the caudal pole, and 2.34 cm in length. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is somewhat abnormal in appearance in that it is heterogeneous and the margins are slightly irregular in appearance. No evidence of vascular invasion is visualized.

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



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vasculature and biliary tract appear normal. There are too numerous to count, variably sized, ill-defined, hypoechoic nodules throughout the parenchyma, varying in size from approximately 0.25-2.0 cm.

The gall bladder lumen is significantly distended. Some areas of the wall appear slightly irregular and mildly thickened (up to 0.60 cm) with adherent debris and mild surrounding inflammation. There is a large amount of primarily non-organized echogenic debris. There is no evidence of bile duct dilation.

Gastrointestinal

The stomach contains large shadowing ingesta. 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. Duuodenum wall meaures 0.46 cm. Jejunum wall measures 0.34 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 area of 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.

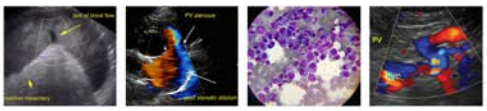
ULTRASONOGRAPHIC FINDINGS

- Bilaterally irregular, heterogeneous, large adrenal glands – 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 ill-defined hypoechoic nodules – 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 nodules observed trend toward a more benign process but underlying neoplasia cannot be ruled out.

- Decreased corticomedullary distinction in both kidneys with left-sided pyelectasia and a renal cyst – The bilateral renal findings are consistent with age-related change. Pyelectasia of the kidney(s)could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.

- Large, distended gallbladder with a thickened wall and a large amount of intraluminal debris – Findings could be consistent with early cholecystitis. Consider medical therapy and close monitoring.



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- Large, shadowing ingesta within the gastric lumen – Correlate with the feeding history and abdominal radiographs. If the patient was adequately fasted consider such differentials as delayed gastric emptying, a partial outflow tract obstruction (none seen) or ingested foreign material.

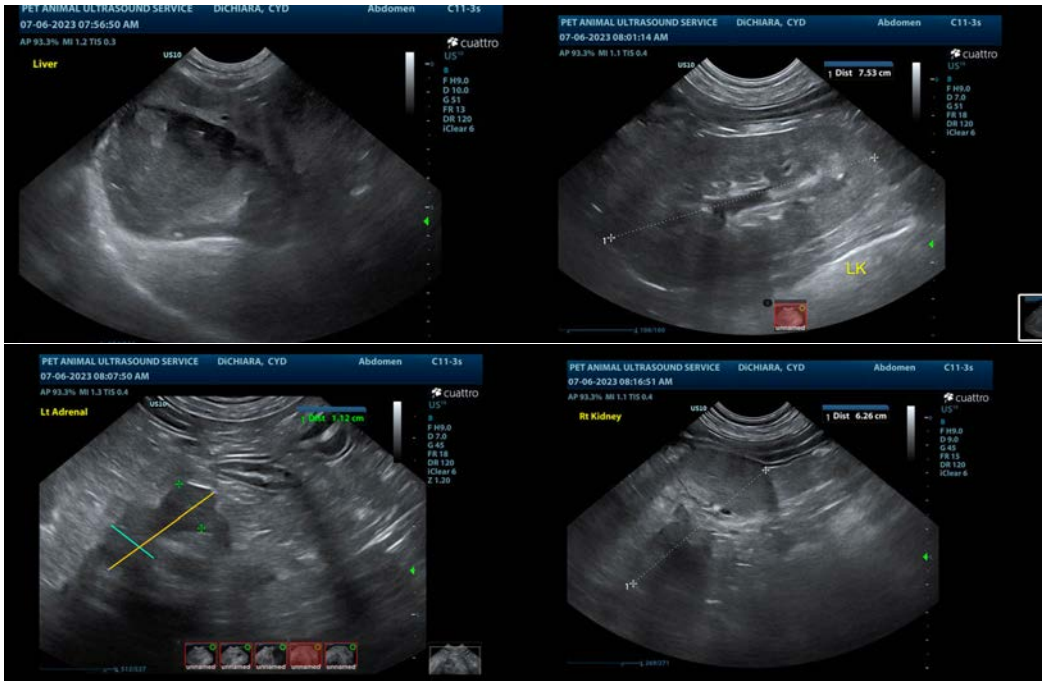
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Some of the changes observed on today's scan could be consistent with pituitary dependent hyperadrenocorticism. Both adrenals appear somewhat large and irregular. Additionally, the liver is large and heterogeneous with ill-defined hypoechoic nodules. These changes could be consistent with a vacuolar hepatopathy and could explain the elevation in ALP reported. Consider adrenal function testing if this fits. I'm concerned that PDH should not be causing this patient to not feel well, have difficulty breathing, etc., and it may be difficult to interpret and adrenal function test if there is concurrent illness. Recommend repeat imaging of the adrenal glands in a few months, as they do appear somewhat irregular and I want to confirm there is no progression of that irregularity.

The gallbladder is large and distended and the gallbladder wall appears moderately thickened. There is questionable mild surrounding inflammation. Consider starting Ursodiol and possibly a course of antibiotics (with concurrent probiotics administered at least two hours apart from the antibiotics), and continued monitoring of the liver enzymes and the appearance of the gallbladder for possible progression of this lesion. This could be causing some of the decrease in appetite, but this could also be an incidental finding at this time.

The description of the respiratory symptoms is concerning. It is unclear if this represents panting or something more concerning. Given the breed, you might consider a cardiac evaluation, 3-view thoracic radiographs, etc.

Recommend a urinalysis, culture, and a blood pressure due to the changes observed in the kidneys and the adrenals. If this patient was fasted, correlate with abdominal radiographs to ensure there is not ingested foreign material in the stomach.



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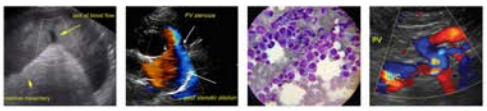

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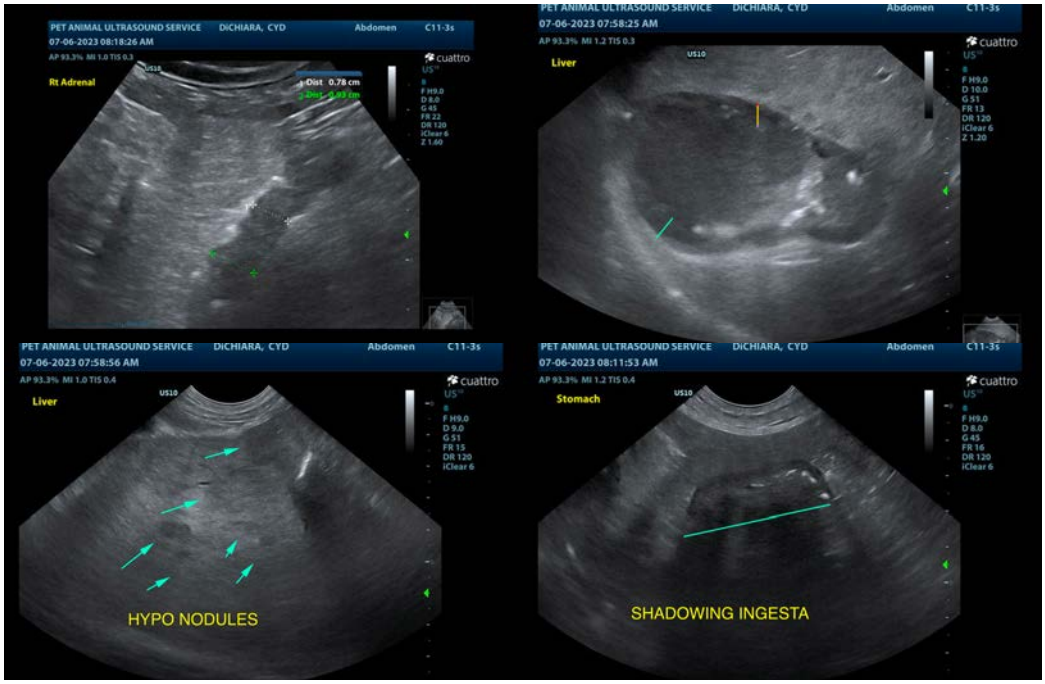

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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