

**DATE PRESENTING CLINICAL SIGNS**

4/13/23

11 y/o FS Poodle. 3/31 -- Breathing hard; history of tracheal collapse, (has Tussigon). Seen Pet ER on 3/31 Diagnosed new diabetic. BW: BG 656, BUN 46, Phos 8.2, TP 9.6, ALT --, ALKP 527, T-BILI 2.7, CHOL 434, K 6.0, trace ketones. X-Rays performed and sent out-- trachea collapse, possible secondary interstitial pattern, hepatomegaly, renal changes—possible infarct/chronic. Current Problems--Presented here for continued care on 4/11. Anorexia X 5 days-despite IVF, GI meds and entice. Azotemia-- Liver enzymes -- normalized besides ALKP. Has not need insulin, ketones neg/trace only. Recheck labs: RDVM 4/11 SDMA 41, Creat 6.3, BUN 143, PHos 16.1, ALT 70 ALKP 585, bili 0.1. Ours 4/12 Creat 128, BUN 6.0

SPECIES

Canine

Current Medications: Omeprazole, Cerenia, Metronidazole, Buprenorphine, Ampicillin, Ketoralac, Protioinix. Lab Results: See attached.

BREED

Miniature Poodle

Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brillhart, RDMS.

SEX

Spayed Female

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**AGE**

4/11/12

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.

WEIGHT

18.7 Pounds

The left kidney has a normal shape and size (4.48 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.

INTERPRETED BY

Kathleen Sennello DVM,
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The right kidney has a normal shape and size (4.28 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.

HOSPITAL NAME

Animal Emergency
Hospital

Adrenal Glands

The left adrenal gland is borderline large at 0.86 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.

REFERRING VET

Dr. Saubier

The right adrenal gland is normal/borderline large at 0.88 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.

INVOICE

46652

Spleen

The spleen is subjectively normal in size (0.77 cm), echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There are too numerous to count pinpoint hyperechoic foci most consistent with small mineralizations.

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. There are numerous ill-defined hyper- and hypoechoic nodules visualized within the parenchyma. Examples of hyperechoic nodules measure 0.63 cm and 0.40 cm.

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 mild 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. Duodenum wall measures 0.37 cm. Jejunum wall measures 0.35 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 prominent and mottled compared to the surrounding isoechoic 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.

PRIMARY FINDINGS

- Borderline 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.
- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.
- Prominent, mottled pancreas – The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- Large, heterogeneous liver with ill-defined hyper- and 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 ill-defined nodules likely represent benign changes. An underlying neoplastic process cannot be ruled out.
- Mild gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

SECONDARY FINDINGS

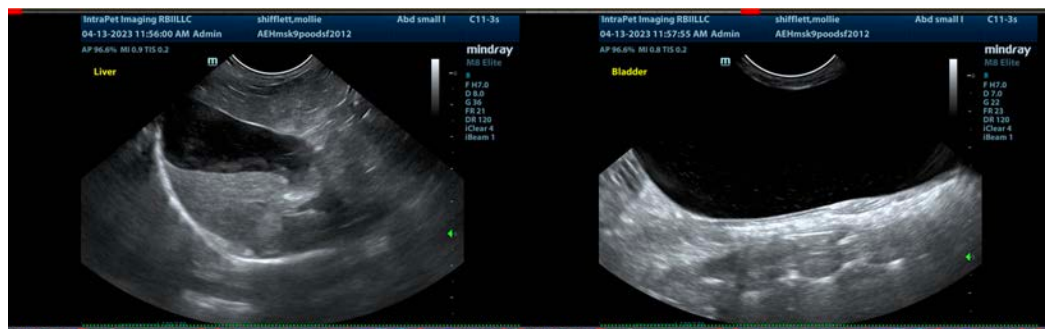
- Pinpoint foci visualized within the splenic parenchyma – Findings are most consistent with dystrophic mineralization.

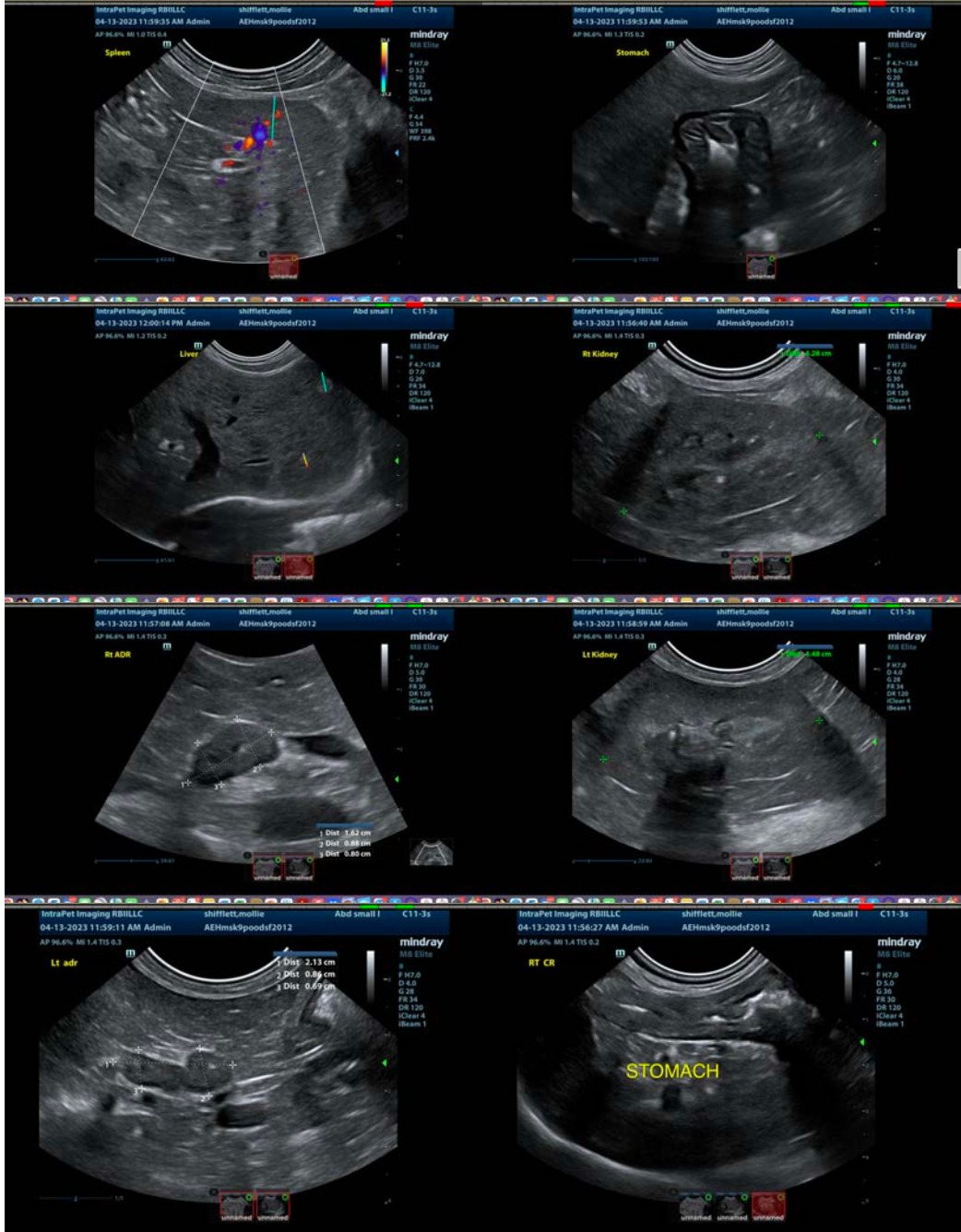
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

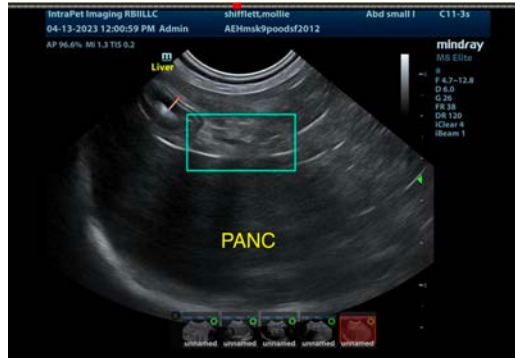
No significant focal lesions are visualized associated with the liver or biliary tract. The bilirubin elevation is most likely consistent with a diffuse hepatopathy. Recommend urinalysis and culture and stabilization of the diabetes. Also consider concurrent treatment for mild pancreatic inflammation. If the bilirubin elevation persists, consider the following:

- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc...
- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history
- If not already done, consider pre and post prandial bile acids to evaluate liver function
- If the ALP is significantly elevated relative to the ALT and symptoms consistent with Cushing's are present, consider adrenal function testing (ACTH stim)
- Consider Fine needle aspirate if round cell neoplasia is on your differential list (25 g needle, normal coags)
- If no response to supportive care (Denamarin, fluids, antibiotics, +/- ursodiol etc.) Consider liver biopsy with samples obtained for histopathology, culture, and copper levels.

Both adrenal glands are somewhat plump in appearance. Once things appear stabilized, consider reevaluation of the adrenal glands. If they remain enlarged and there are signs of Cushing's disease (insulin resistance, etc.), consider adrenal function testing.







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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