

PATIENT

Bentley Dallaire

SPECIES

Canine

BREED

Boxer Cross

SEX

Neutered male

AGE

12 years

WEIGHT

71 lbs

INTERPRETED BY

Dr Brittany Sinclair,
BVSc(hons), DACVECC

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

Dog and Cat of Niagara

REFERRING VET

Dr. Haidy

INVOICE

43289

DATE

3/14/23

PRESENTING CLINICAL SIGNS

History: Diagnosed with Cushing's 1 year ago. Taking Vetoryl with no change in symptoms. Increased dose and noted Bentley not eating, loose stools and concerns for Addison's. Stopped Vetoryl. Current meds : Prednisone 5mg

Abnormal PE/Chem/CBC/UA Results: CBC normal other than M1 elevation in platelets, Chemistry unremarkable other than ALT 257(1-125) ALP 890 (23-212) Feb 21,23 Baseline cortisol 61(28-120)Cortisol Post ACTH 110(220-550) Electrolytes WNL ,SNAP cPL normal, March 10,23 Cortisol Baseline less than 28(28-120) Post cortisol ACTH 29(220-550)

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 were both normal size and structure, with smooth capsule and normal corticomedullary definition and ratio (cortex 1/3 of medulla). Medullary structure differed distinctly from that of the cortex. No evidence of pelvic dilation was present. Visualization of right kidney was somewhat limited. This is commonly due to breed related anatomical positioning. The left kidney measured 6.49 cm and the right kidney measured 7.6 cm.

Adrenal Glands

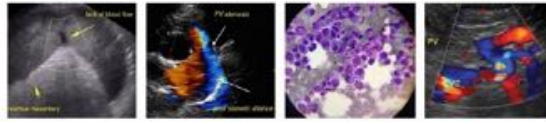
Both adrenal glands were visualized and recognized. Both were enlarged and hypoechoic. The phrenic vasculature, glandular echogenicity and detail were unremarkable. The left adrenal gland measured 2.86 cm in length x 0.81 cm at the caudal pole and 1.17 cm at the cranial pole. The right adrenal gland measured 2.13 cm in length and 0.86 cm at the caudal pole and 1.92 cm at the cranial 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 normal in size with slight rounding of lobes and the parenchyma contains multifocal variably sized hypoechoic nodules and a coarse appearance. No specific masses are visualized. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed. Gallbladder is moderately distended with normal wall thickness and anechoic contents. Common bile duct is non-distended and tapers normally.


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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. 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.

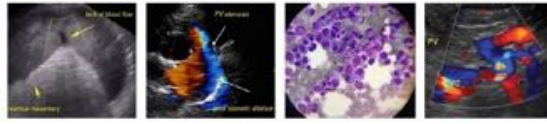
ULTRASONOGRAPHIC FINDINGS
Primary Findings

1. Vacuolar hepatopathy
2. Bilateral adrenomegaly

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Acute onset inappetence and GI signs are likely attributable to reported acute hypoadrenocorticism. There is no definitive alternative explanation present in this study.

Liver changes are most consistent with a vacuolar hepatopathy, though this diagnosis cannot be definitively made with ultrasound imaging alone. Vacuolar degeneration 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 liver aspirate is recommended to further characterize these ultrasonographic changes. Ultimately liver biopsy is generally required for definitive diagnosis and should be considered if significant clinical signs or severe



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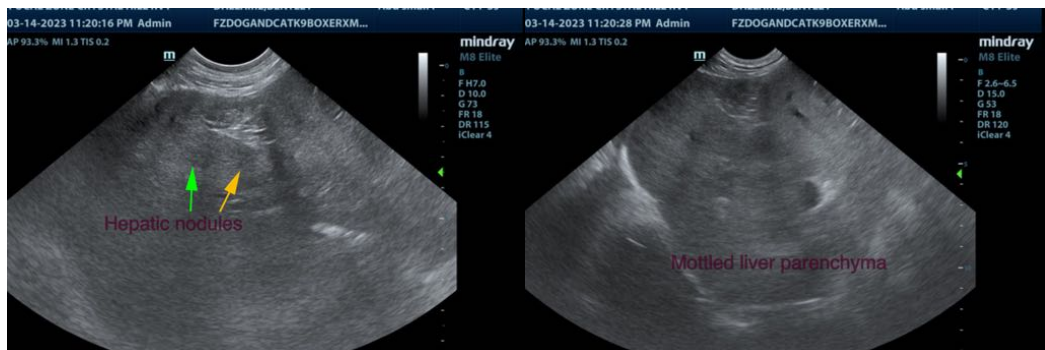
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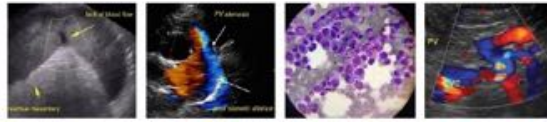
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liver enzyme elevations are progressive despite empiric treatments (SAM-E, milk thistle, Vitamin E, ursodiol). Bile acid profile could be considered to assess liver function if clinically indicated. Clinical signs associated with vacuolar hepatopathy often reflect underlying disease. Idiopathic vacuolar hepatopathy may be asymptomatic and treatment is not necessarily indicated or effective at reducing liver enzymes. Imaging should be rechecked on a routine basis (q3-6mo) or if further significant increase in liver enzymes and/or new clinical signs are noted.

Bilateral adrenomegaly is consistent with reported hyperadrenocorticism. Vetoryl toxicity induced hypoadrenocorticism may not decrease the size of adrenal glands and can make adrenal glands bigger in the inflammatory phase. Continued treatment with prednisone is recommended.





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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.

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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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