

PATIENT PRESENTING CLINICAL SIGNS

Caspian Marcus Clinical Exam Findings: Many abnormalities that suggest liver insult, signs of failure. Current Medications none now - stopped clavamox on Monday 8/16/21
SPECIES BUN 12, Crea 0.5, Phos 6.3, Alb 1.8, Glob 1.9, ALT 348, AST 182, ALP 265, Chol 72, WB 21.4, Hct 27

Canine **ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

BREED *Urinary System*

Burnese Mtn Dog The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen. Mild dependent mineralized sand was present. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

SEX

Intact Male The prostate was of expected appearance and size for a young intact male canine, measuring 1.0 cm in diameter.

AGE

8 Months Both kidneys exhibited subjective mild prominent size and maintained 1:3 cortex/medulla ratio with overall normal renal architecture. Subtle, mildly non-uniform increased corticomedullary echogenicity and subjective pinpoint medullary mineralization noted. No overt evidence of pyelectasia. The left kidney measured 7.8 cm. The right kidney measured 8.5 cm.

WEIGHT

57.2

Adrenal Glands

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.45 cm at the cranial pole and 0.43 cm at the caudal pole. The right adrenal gland was not definitively visualized owing to patient conformation.

Spleen

IMAGING PERFORMED BY

Jenn Walsh

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

Liver

HOSPITAL NAME

Whole Pet Vet Clinic

The liver was subnormal in size. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

REFERRING VET

Dr. DeMarco

Gastrointestinal

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The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction or foreign material. Gastric body wall measured 0.45 cm.

DATE

8/18/21

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material. Jejunum wall measured 0.36 cm. Portions of the stomach and cranial abdominal small intestine appeared to be adjacent to the diaphragm, likely owing to subnormal hepatic size.

Normal visible colon wall layers were present with apparent formed feces in lumen.



PATIENT *Pancreas*

Caspian Marcus

The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

SPECIES

Canine

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

BREED

Burnese Mtn Dog

ULTRASONOGRAPHIC FINDINGS

SEX

Intact Male

- Mild dependent mineralized urinary bladder sand
- Subjective mildly prominent kidneys with mild increased corticomedullary echogenicity and pinpoint medullary mineral
- Subnormal liver

AGE

8 Months

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

WEIGHT

57.2

Sonographically, the appearance of the liver was not overtly consistent with acute hepatic inflammation or insult, which typically exhibits increased hepatic size and decreased parenchyma echogenicity. Potential considerations for the liver may include primary hepatic parenchymal disease, microvascular dysplasia/portal vein hypoplasia, portosystemic vascular anomaly, or other hepatopathy. Given the subnormal liver size in combination with the appearance of the bilateral kidneys as well as presence of mineralized urinary bladder sand, potential for a portosystemic vascular anomaly is favored in this case.

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(Canine and Feline)

Additional assessment may include (if not done) fasting and post-prandial bile acids +/- Leptospirosis titers/PCR if clinically indicated. Urine culture and sensitivity on sterile urine sample recommended to rule out underlying infection. Gold standard CT with contrast may be indicated for further assessment, especially if post-prandial bile acids are significantly elevated (typically >100) with the presence of a shunt. Empirically, some or all of the following protocol may be considered. Hepatic biopsy may be required for definitive diagnosis is portosystemic shunt is ruled out.

IMAGING PERFORMED BY

Jenn Walsh

Hepatic Support for Bile Acid Elevation +/- Hepatic Encephalopathy

HOSPITAL NAME

Whole Pet Vet Clinic

Royal Canin Hepatic Support diet or Hills L/D, Metronidazole (7.5 mg/kg PO bid) over the next 14 days, Lactulose (Oral: 3.1-3.7 g/5 ml lactulose in a syrup base) long term to target 2-3 soft stools/day, with a high-quality protein supplement of minor amount of yogurt or cheddar cheese. Monitor bile acids, with attention paid to dropping albumin, BUN or cholesterol. SAME and nutraceuticals as needed. **Ursodiol (10-15 mg/kg p.o. q24h)** can be considered as hepatoprotectant and to enhance bile flow. **Zinc** serum level keep between 200–500 ug/dl. If deficient then Tx zinc acetate 1-3 mg/kg/day. Gastrointestinal protectants are recommended if the patient is anorexic.

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SPECIES

Canine

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Burnese Mtn Dog

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Intact Male

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HOSPITAL NAME

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REFERRING VET

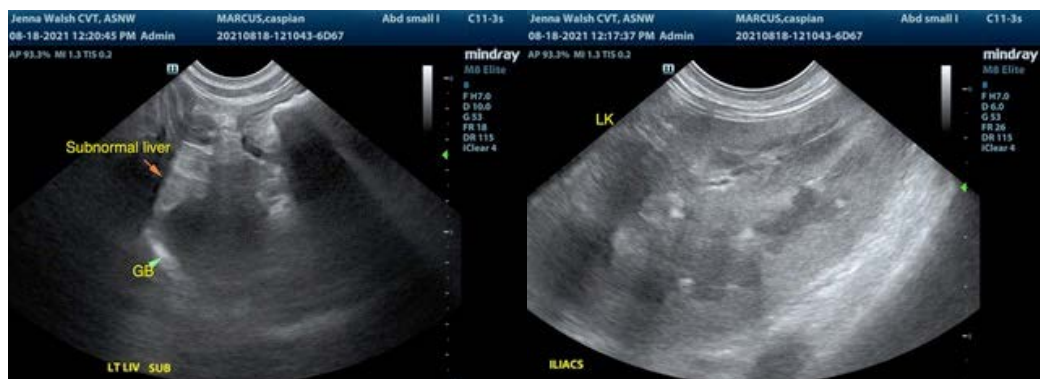
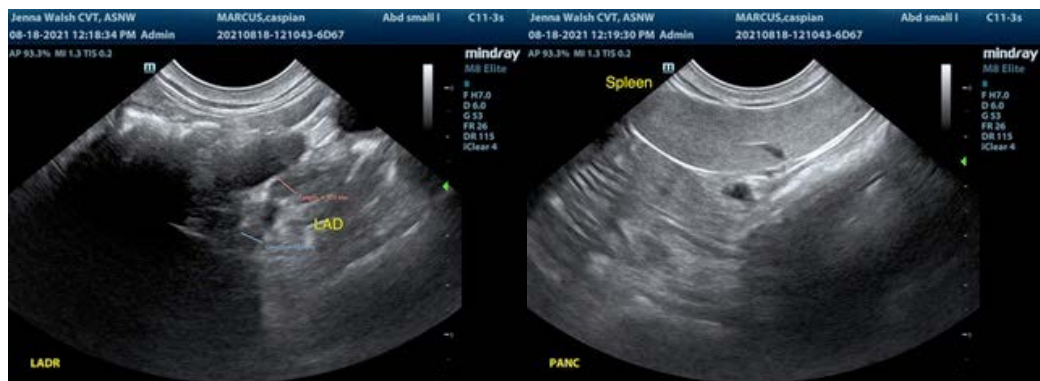
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PATIENT

Caspian Marcus

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

SPECIES

Canine

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.

BREED

Burnese Mtn Dog

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info@SonoPath.com

SEX

Intact Male

AGE

8 Months

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