



## PATIENT

Emmy Boyd

## SPECIES

Canine

## BREED

Chihuahua Mix

## SEX

FS

## AGE

13yr

## WEIGHT

4.5kg

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Lindsay Powell, CVT

## HOSPITAL NAME

Hershey Animal  
Emergency Center

## REFERRING VET

Dr. Victoria Orlando

## INVOICE

23759

## DATE

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## PRESENTING CLINICAL SIGNS

- Has not eaten since Friday. Drinking occasionally. Diarrhea twice today (large amount, brown liquid) today. Still urinating. Vomited twice on Sunday (liquid + the Proviabale paste O gave her). Very lethargic.
- PE Grade 3/6 HM
- Severe periodontal disease
- LS OU
- Marked pain upon cranial abdominal palpation
- Mucoïd diarrhea on rectal exam
- Weak and unable to stand without assistance

Abnormal PE/Chem/CBC/UA Results: HAEC Dx 1/31: CBC: inflammatory leukogram (WBC 19.42 neutrophilia (17.83), with left shift), lymphopenia 0.42 Chem: TP 8.5, hyperglobulinemia 5.2 EPOC: hyperlactatemia (6.25), hyperglycemia (125), pH 7.340 cPL: WNL Rads: Soft tissue opaque structure at the plane of the caudal esophagus most consistent with a hiatal hernia. Mild left-sided cardiomegaly with no evidence of congestive heart failure likely secondary to myxomatous mitral valve degeneration given the breed and reported heart murmur. Intervertebral disc disease at T 11-12 and T 12-13. HAEC 2/2: EPOC: pH 7.327 (L), K 3.2 (L), BUN 32 (H) PCV/TS: 50/8.0 UA: USG >1.050, pH 7.0, Urine protein 30, Blood 50, WBC >50/HPF, RBC 11/HPF, non-hyaline casts >1/LPF, bacterial confirm shows no bacteria HAEC 2/3 6 AM: PCV : 38% & 6.2

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no evidence of urine/lumen sediment, mineral, or calculi. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 3.6 cm in length. The right kidney measured 3.6 cm in length.

The area of the aortic trifurcation was free of pathology.

### Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.45 cm width at the caudal pole. The right adrenal gland was mild enlarged in size based on caudal pole width with normal contour and a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.61 cm width at the caudal pole.

### Spleen



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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/Gallbladder*

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. Normal vascular volume. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and mild congealed non-organized debris. The cystic and common bile ducts were normal.

### *Gastrointestinal*

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. The visualized stomach appeared to be completely within the abdominal cavity.

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 mechanical/metabolic ileus, obstruction or foreign material.

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

### *Pancreas*

The pancreas was normal in size with isoechoic to mildly heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia. Indistinct pancreatic capsule compared to isoechoic adjacent omentum.

### *Free Abdomen*

No omental masses, overt lymphadenopathy or peritoneal effusion was present.

## ULTRASONOGRAPHIC FINDINGS

### Primary

- Mild heterogeneous pancreas
- Normal empty gastrointestinal tract, normal colon with semi-formed /soft fecal matter
- Mild non-organized gallbladder debris
- Mild age related renal changes
- Mild right adrenomegaly

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overall, no evidence of significant visceral pathology as a definitive cause of the patient's presentation. A sliding hiatal hernia is possible in conjunction with radiographic findings. Mild pancreatitis at times may present sonographically unremarkable or similar. No evidence of significant active pancreatic inflammation, peritonitis or overt neoplastic criteria.



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Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered. A GI panel to include PLI/TLI/Cobalamin/Folate may be considered to assess for occult or non-structural disease. Correlation with neurological and musculoskeletal exam is recommended.

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Continued empirical therapy for non-specific gastroenterocolitis +/- mild pancreatitis would be appropriate.

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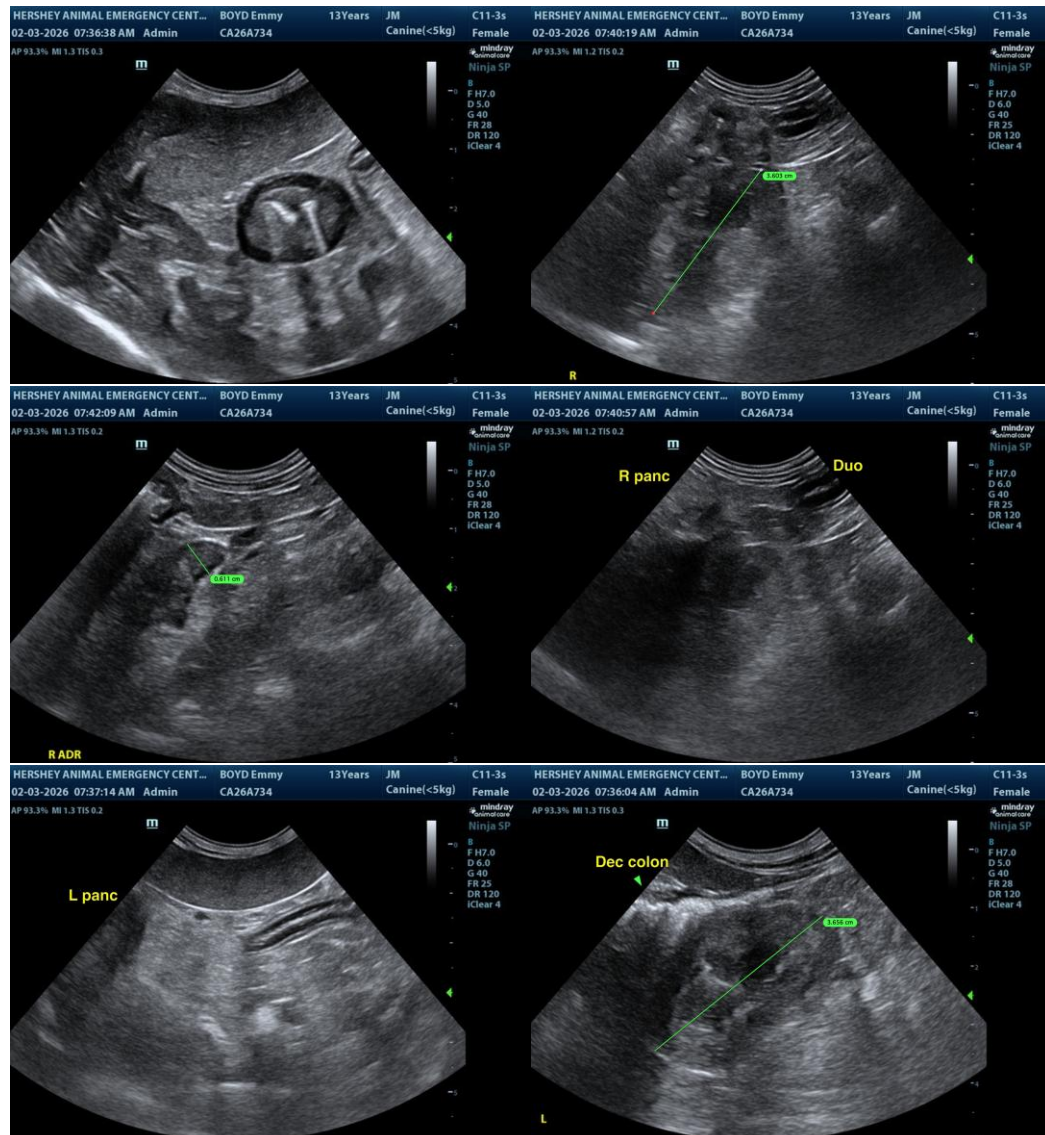
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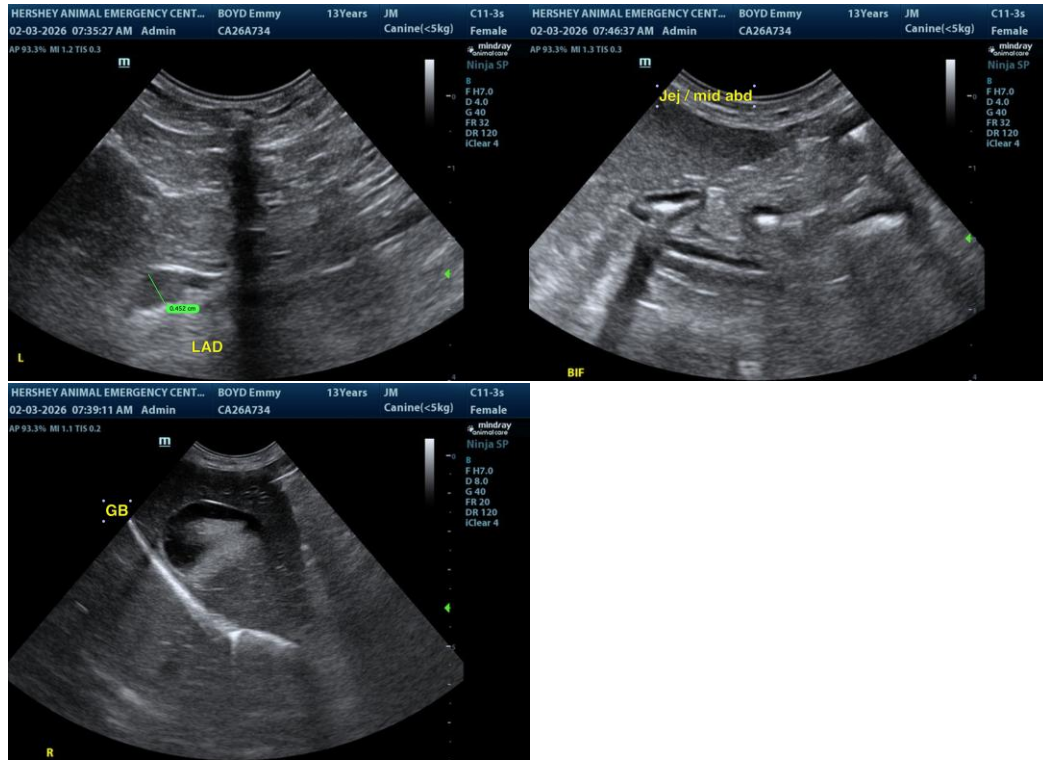
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine/Feline Practice)  
[info@sonopath.com](mailto:info@sonopath.com)