



PATIENT PRESENTING CLINICAL SIGNS

Mia Haslam History: 2 month duration decreased appetite, intermittent vomiting, lethargy, incontinent, PU/PD
Medication: Gabapentin, Galliprant

SPECIES Canine Urinalysis - USG 1.008, negative protein and glucose. Unremarkable CBC/Chem. Sodium/Potassium ratio 33.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND CHEST

BREED

Pitbull

SEX

FS

AGE

10 years

WEIGHT

70 Pounds

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT			NM	1.35	40.5	74.6	0.3
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short axis Base view (cm)	LVIDd Avg; 2D and m-mode short axis (cm)	LVIDs Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
PATIENT	NM	NM	NM		3.8	4.2	

INTERPRETED BY

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(Canine and Feline)

IMAGING PERFORMED BY

Rebekah Jakum, CVT
ARDMS/RVT

HOSPITAL NAME

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Veterinarian

REFERRING VET

Dr. Longenecker

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Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.

Urinary System

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 with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.



PATIENT Mia Haslam
SPECIES Canine
 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 loss of corticomedullary symmetry and definition expected for the age of the patient. Minor medullary mineralization was noted in both kidneys. Mild right kidney pyelectasia noted. The right kidney measured 6.0 cm.

The area of the aortic trifurcation was free of pathology.

Adrenal Glands

BREED Pitbull
 The adrenal glands were uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 2.1 cm length x 0.55 cm at the caudal pole. The right adrenal gland measured 2.6 cm length x 0.49 cm at the caudal pole.

Spleen

SEX FS
AGE 10 years
 The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. 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. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age related remodeling with minor potential for inflammatory or neoplastic disease.

Liver

WEIGHT 70 Pounds
 The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. 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.

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Gastrointestinal

The stomach exhibited subjective mild regional hypertrophy primarily in the cranial gastric body wall. Additional areas of stomach wall were sonographically unremarkable. Normal appearing stomach wall measured 0.37 cm in width. Areas of subtle gastric mural hypertrophy measured up to 0.98 cm in width, exhibiting intact yet subjective indistinct wall layering. The stomach was empty with mild to moderate luminal gas. No evidence of retained ingesta, fluid or foreign material.

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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.

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

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Pancreas

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. Low-grade or chronic pancreatic inflammation may be present, yet ultrasonographically normal.

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Free Abdomen

No omental masses, lymphadenopathy or peritoneal effusion.

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PATIENT ULTRASONOGRAPHIC FINDINGS

Mia Haslam

- Normal echocardiogram
- Sonographically unremarkable urinary bladder and visible proximal urethra
- Mild chronic renal changes with minor medullary mineral and minor right kidney pyelectasia
- Mild non-homogeneous spleen – suspect benign or age related splenic changes, mild hematopoiesis, subtle areas of lymphoid hyperplasia, with early splenic neoplasia considered an unlikely differential diagnosis.
- Mild regional gastric wall thickening

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The pyelectasia in the right kidney is likely owing to mild chronic changes or potential pelvic scarring. Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered.

Assuming normal clotting status, ultrasound guided splenic FNA using 25-gauge needle may be considered, primarily to ensure only benign splenic changes are present.

Screening cortisol level may be considered to rule out occult Addison’s disease given the PU/PD and vague clinical signs.

The mild regional gastric wall thickening is non-specific, yet may suggest regional gastritis. The potential for emerging infiltrative gastric mural process cannot be definitively excluded. Some or all of the following protocol could be considered with assessment of clinical response.

Helicobacter/Gastritis protocol

A clinical trial of **Zithromax** (Dogs: 5-10 mg/kg p.o. q24h. May increase dosing interval to q48h after 3-5 days of treatment), **Metronidazole** (10-20 mg/kg p.o. b.i.d.), **Pepcid** (0.5-1 mg/kg s.i.d.) and **Sucralfate** (0.5-2 g/dog PO) or **Omeprazole** (1 mg/kg p.o. s.i.d.) over the next 3 weeks along with a **novel-protein or hydrolyzed diet** with slurry feeding b.i.d./t.i.d. over the next 2-4 days and then increase to canned diet bid. Dry food should be avoided over the next 4 weeks. A recheck sonogram to assess GI improvement or progression would be ideal in 4 weeks.

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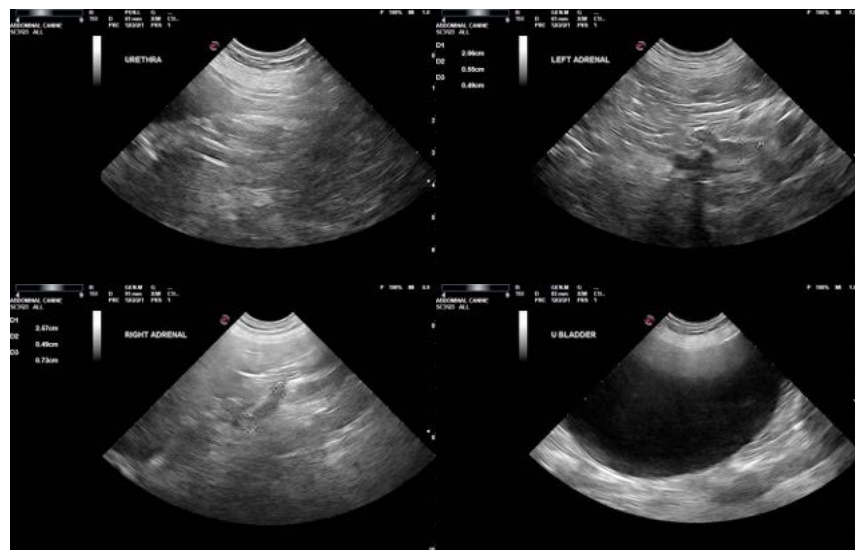
Dr. Longenecker

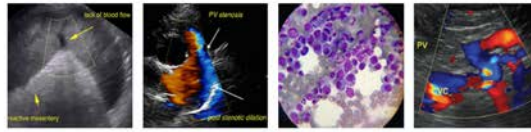
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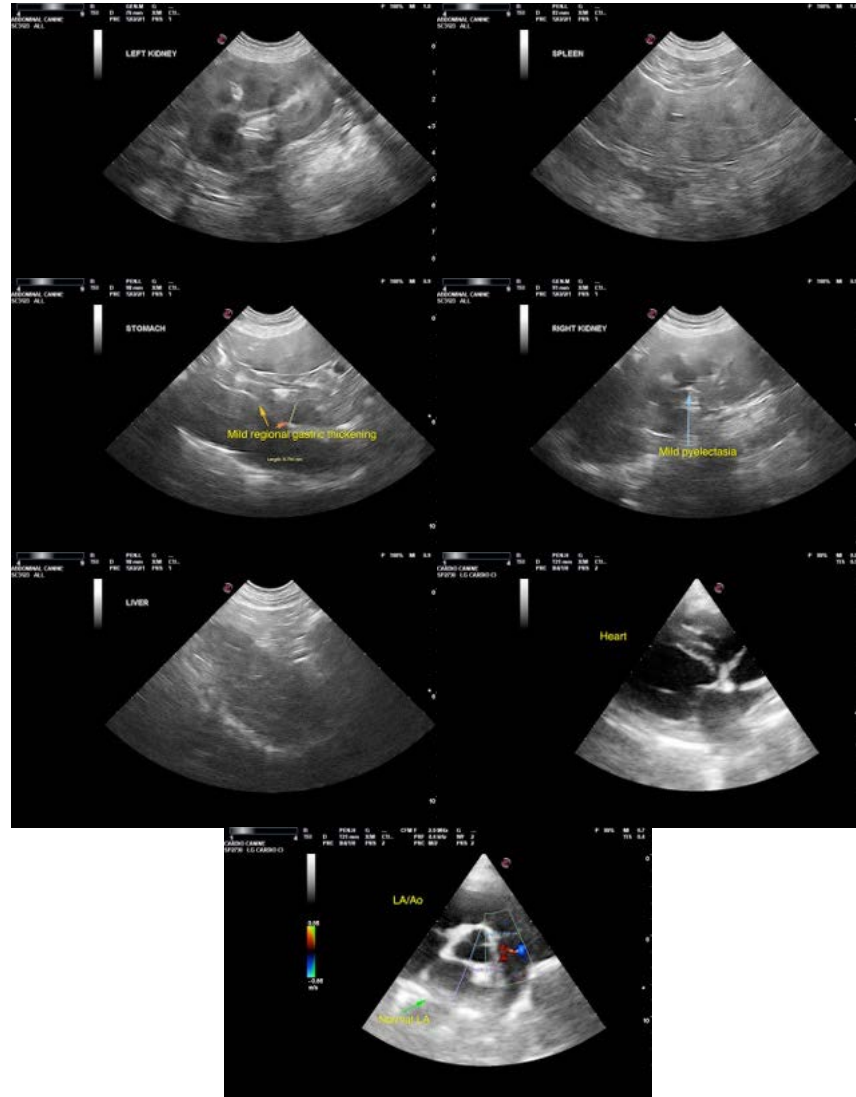
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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