



PATIENT PRESENTING CLINICAL SIGNS

Elsa Steele Groaning when laying down, seems uncomfortable, painful, twitches on and off. Current meds: Trazadone, Apoquel
 Abnormal PE/Chem/CBC/UA Results: USG 1.019

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

BREED

German Shepherd X

SEX

Spayed Female

AGE

5 Years 3 Months

WEIGHT

100.5 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			1.1	1.1	35.1	67.9	0.4
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	100	1.5	0.93		3.7	3.7	

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi

HOSPITAL NAME

Loving Care VH

REFERRING VET

Dr. Steele

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. Color doppler assessment of the mitral valve revealed trace insufficiency. 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

INVOICE

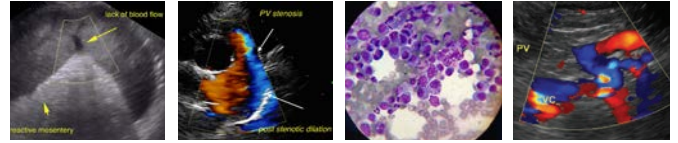
25383

DATE

9/14/21

The urinary bladder was mildly subnormal in size owing to lack of urine volume. This is likely secondary to pre-ultrasound urination. No evidence of neoplastic or inflammatory mural criteria. No sediment or calculi. The urethra was normal in structure and tone to a depth of 5.0 cm.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or



PATIENT	slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 6.9 cm. The right kidney measured 7.8 cm.
Elsa Steele	The area of the aortic trifurcation was free of pathology.
SPECIES	<i>Adrenal Glands</i>
Canine	The adrenal glands were uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 2.8 cm length x 0.89 cm at the caudal pole. The left adrenal gland measured 2.2 cm length x 0.77 cm at the caudal pole.
BREED	<i>Spleen</i>
German Shepherd X	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.
SEX	<i>Liver</i>
Spayed Female	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. 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.
AGE	<i>Gastrointestinal</i>
5 Years 3 Months	The stomach presented intact wall layering with a normal wall layer ratio. Minor echogenic, non-shadowing luminal ingesta.
WEIGHT	INTERPRETED BY
100.5 Pounds	R. McKenzie Daniel, DVM, DABVP (Canine and Feline)
IMAGING PERFORMED BY	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.
Shari Reffi	Normal visible colon wall layers were present with apparent formed feces in lumen.
HOSPITAL NAME	<i>Pancreas</i>
Loving Care VH	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.
REFERRING VET	<i>Free Abdomen</i>
Dr. Steele	No intraabdominal masses, lymphadenopathy or effusion.
INVOICE	ULTRASONOGRAPHIC FINDINGS
25383	<ul style="list-style-type: none"> • Overtly normal cardiac structure and function • Trace mitral valve insufficiency • Sonographically unremarkable abdomen
DATE	<u>INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS</u>
9/14/21	No evidence of structural/functional cardiomyopathy or abdominal visceral pathology as the patient's clinical signs or discomfort. The trace mitral valve insufficiency is not considered clinically significant and not likely audible. Thorough musculoskeletal and neurological examination recommended if not done.



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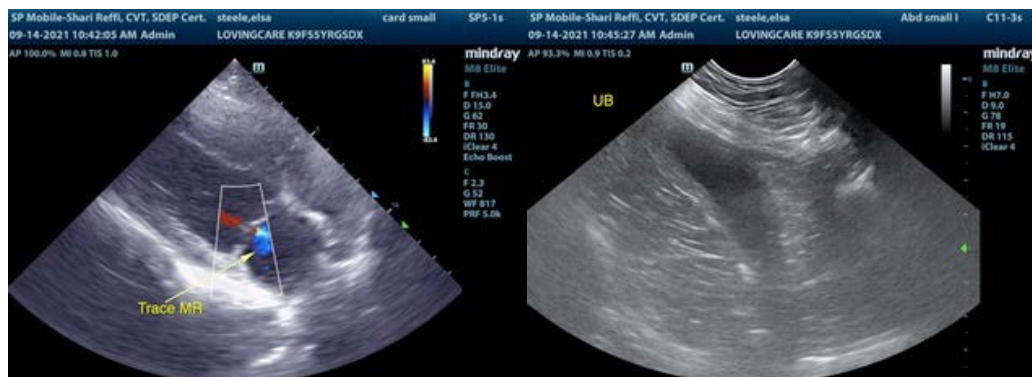
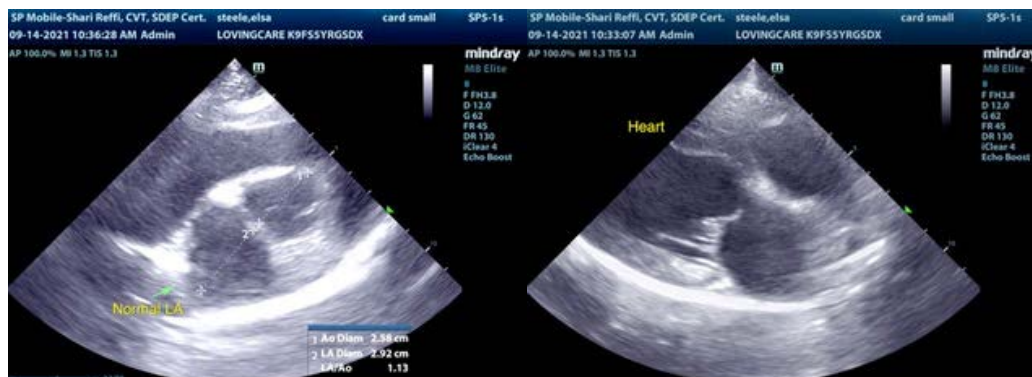
Dr. Steele

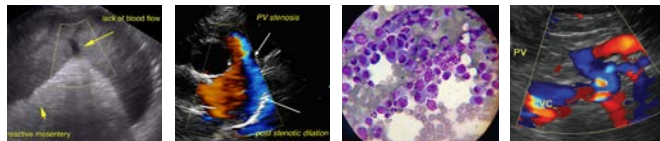
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com