

**PATIENT**

Gracie Schmit

PRESENTING CLINICAL SIGNS

History: collapse post blood draw Currently taking: Clavamox 125mg BID rimadyl 25mg BId Ofloxacin eye drops Dexamethasone eye drops, IV Fluids 6/20 post collapse

SPECIES

Canine

Abnormal PE/Chem/CBC/UA Results: collapse post blood draw, Ua trace protein, 2+ UBG, Chem17 BUN/UREA 86, Phos 10.7, Glob 4.8, BUN/CREA 47 ALB/GLOB 0.5, Na/K 32 OSMcalc 333, CBC Neutrophils 1.5 all others WNL

BREED

Sheltie

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN**SEX**

Spayed Female

AGE

14 Years

WEIGHT

20 Pounds

INTERPRETED BY

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

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	<1.3	28-40	40-100	<0.6
PATIENT	5.0	1.7	--	1.57	48	83	0.2
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	1.7	1.3	--	2.5	2.5	--

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented minor vegetative thickening suggestive of minor endocardiosis. Doppler indicated measurable minor eccentric insufficiency. The **left ventricle** presented subjective mild prominent IVS and free wall thicknesses with primarily maintained contour and without dilated or restriction. 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 systolic flow and overall structural integrity. Aortic insufficiency was present on color doppler. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology. Minor TR was present on doppler. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** 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. No echographically detectable evidence of infiltrative disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.

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Sarah Pender, CVT

HOSPITAL NAME

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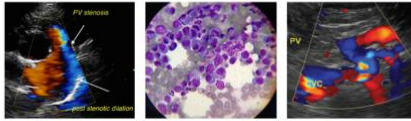
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6/22/22

**PATIENT*****Urinary System***

Gracie Schmit

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 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. Aortic trifurcation was normal.

SPECIES

Canine

Normal size was present in the kidneys. Both kidneys exhibited areas of mild asymmetrical capsule margination. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and moderate loss of corticomedullary symmetry and definition expected for the age of the patient. Mild pyelectasia and pinpoint medullary dystrophic mineral were present in both kidneys. The left kidney measured 5.1 cm in length. The right kidney measured 4.8 cm in length.

BREED

Sheltie

SEX***Adrenal Glands***

Spayed Female

The left adrenal gland exhibited mild prominent size yet maintained symmetrical contour and primarily homogeneous parenchyma. No evidence of nodular changes or tumors. The left adrenal gland measured 2.0 cm in length x 0.74 cm width at the caudal pole.

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The right adrenal gland, by comparison, revealed overtly normal size, position and shape. The right adrenal gland measured 2.3 cm in length x 0.42 cm width at the caudal pole.

WEIGHT

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Spleen

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.

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Liver

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.

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The gallbladder was non distended in size with primarily anechoic content and mild gallbladder debris. The cystic duct and common bile ducts were normal without evidence of dilation.

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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.

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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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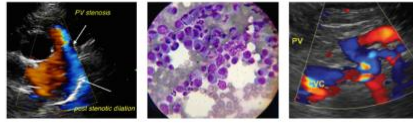
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Pancreas

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

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**PATIENT****Free Abdomen**

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No overt lymphadenopathy or peritoneal effusion was present.

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ULTRASONOGRAPHIC FINDINGS

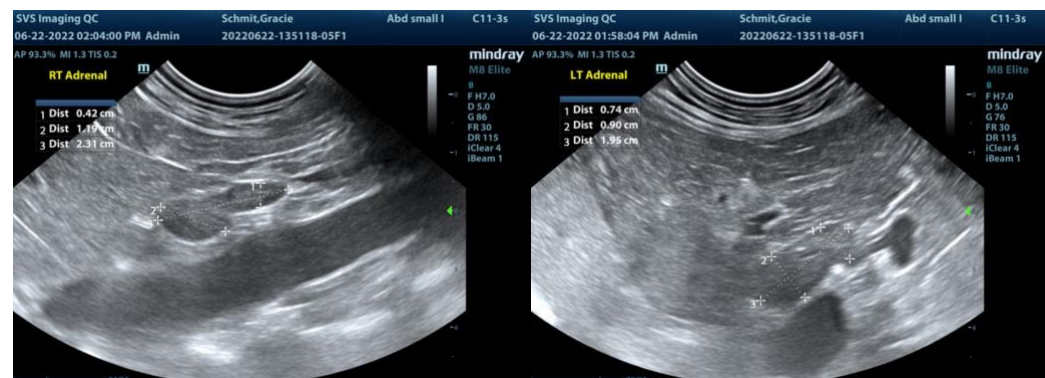
- Overtly normal cardiac structure and function, normal left atrium with subjective mildly prominent IVS and LV free wall
- Mild MR/TR
- Aortic insufficiency
- Moderate chronic renal changes with mild pyelectasia
- Mildly prominent right adrenal gland- nonspecific, patient variant, benign hyperplasia or mild adenomatous change suspected.
- Hepatic parenchymal remodeling
- Mild gallbladder debris (non-mucocele)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Largely geriatric abdomen without evidence of overt or significant visceral pathology.

The overall appearance of the kidneys was most consistent with chronic kidney disease. The pyelectasia in both kidneys may be owing to chronic renal changes, potential pelvic scarring possibly owing to previous calculi passage, IV fluid therapy (if applicable). Urine C/S and protein: creatinine ratio on sterile urine sample is recommended. Baseline renal staging to include UPC, given the quiet urinary bladder sediment is suggested.

The lack of left atrium or right atrium enlargement, given the mild MR and TR, indicates that the risk of future complication secondary to these valvular insufficiencies is low. The subjectively mildly prominent LV walls were nonspecific and may be secondary to pseudohypertrophy or anesthesia. Given the presence of aortic insufficiency and recent collapse, systemic blood pressure is recommended to assess for evidence of hypertension. If hypertension is documented, sonographic monitoring of the left adrenal gland for evidence of progressive changes or enlargement would be warranted. ECG or Holter monitor may be indicated if continued collapsing episodes.





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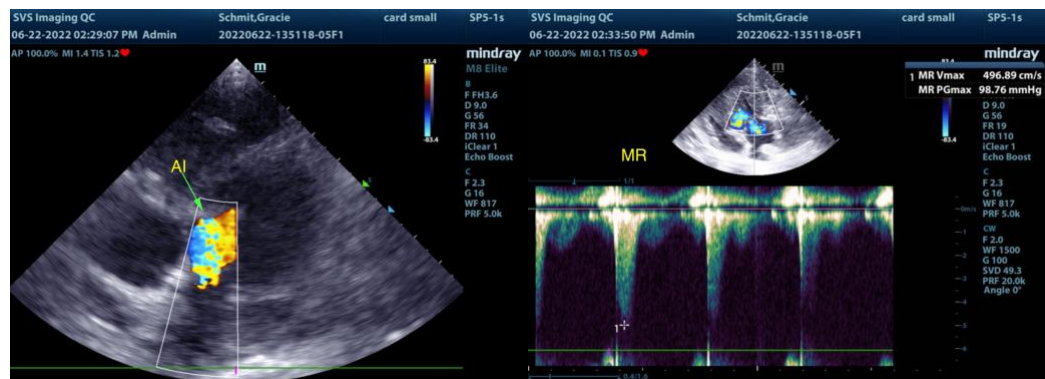
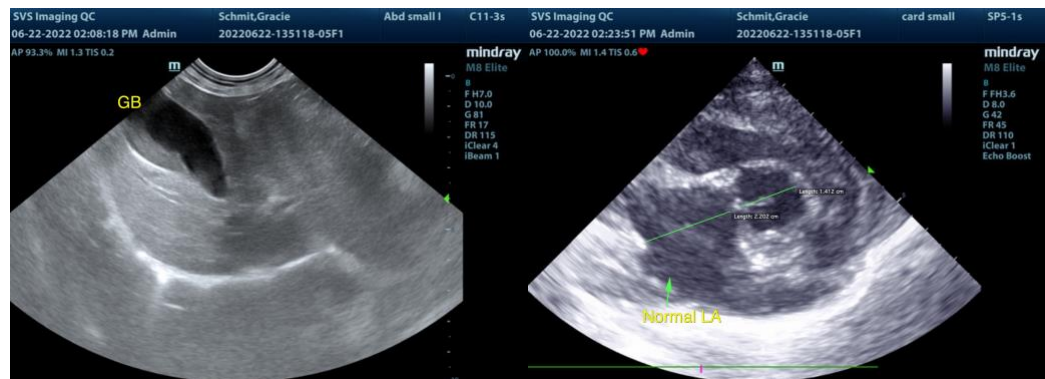
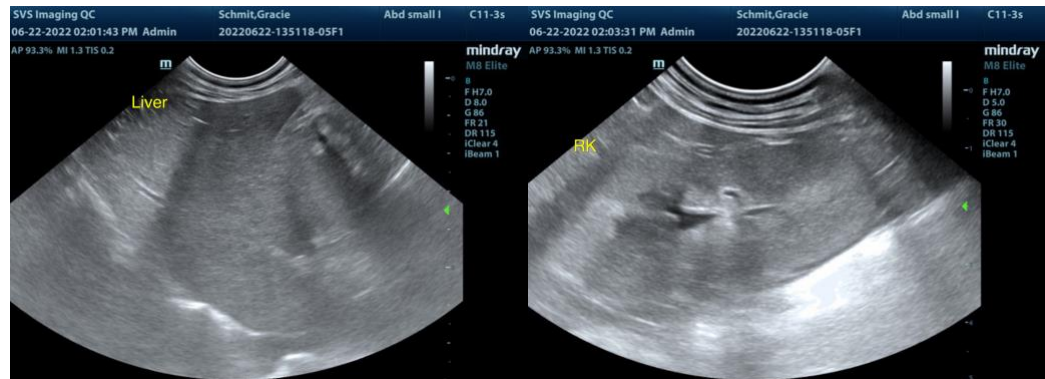
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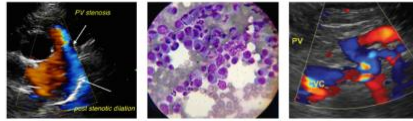
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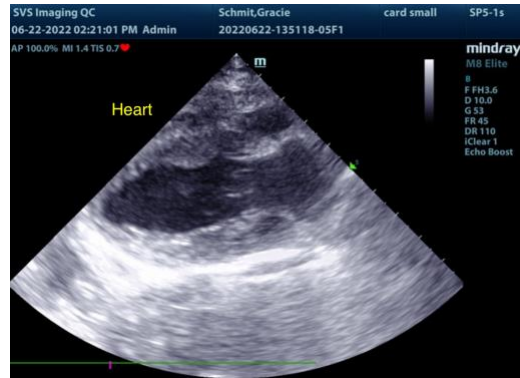
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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