



**PATIENT PRESENTING CLINICAL SIGNS**

Charlie Swords Patient Presented for exam and bloodwork for anal glands. A murmur was noted on exam. Abnormal PE/Chem/CBC/UA Results: Cardiac Murmur Elevated ALT 148 U/L, Elevated GGT 14 U/L No other significant findings noted on the BW Chest Radiographs Pending:

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

**BREED**

Dachshund

**SEX**

Neutered Male

**AGE**

8 Years

**WEIGHT**

14

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			1.2	1.3	--	35	0.1
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	--	--	0.7		2.26	2.4	

**INTERPRETED BY**

Eric Lindquist, DMV DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Garry Gotfredson

**HOSPITAL NAME**

Red Hills Vet Hospital

**REFERRING VET**

Dr. Allie Sowerwine

**INVOICE**

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**DATE**

8/26/21

**Cardiac Presentation**

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. **Mitral** insufficiency noted on color flow assessment. 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. Periodic arrhythmia noted during the exam, may be pronounced sinus arrhythmia.

**Urinary System**

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal. The pelvic urethra was imaged 2.0 cm beyond the cystourethral junction. The iliac trifurcation was unremarkable.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding



**PATIENT**

Charlie Swords

the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. Mineralization noted in both kidneys.

**SPECIES**

Canine

**Adrenal Glands**

The **right adrenal gland** was visualized obliquely and measured 0.6 cm. The left adrenal gland was not visualized.

**BREED**

Dachshund

**Spleen**

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

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Neutered Male

**Liver**

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The **gallbladder** was mildly over distended with suspended and dependent debris, yet not to the level of emerging mucocele, yet sludge appears to be mildly excessive. No adjunctive inflammation was noted.

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**Gastrointestinal**

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

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**Pancreas**

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

**IMAGING PERFORMED BY**

Dr. Garry Gotfredson

**ULTRASONOGRAPHIC FINDINGS**

**HOSPITAL NAME**

Red Hills Vet Hospital

- Stage B1 valvular disease
- Non-specific low-grade inflammatory hepatopathy with excessive gallbladder debris

**REFERRING VET**

Dr. Allie Sowerwine

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

No treatment recommended. Recheck echo in 6 months. Blood pressure measurements warranted. FNA of the liver could be considered for further definition. However, subjectively it appears benign. Proactive treatment with Ursodiol could be considered, 7-10 days Enrofloxacin/Metronidazole, and reassessment of the ALT value. However, changes appeared benign.

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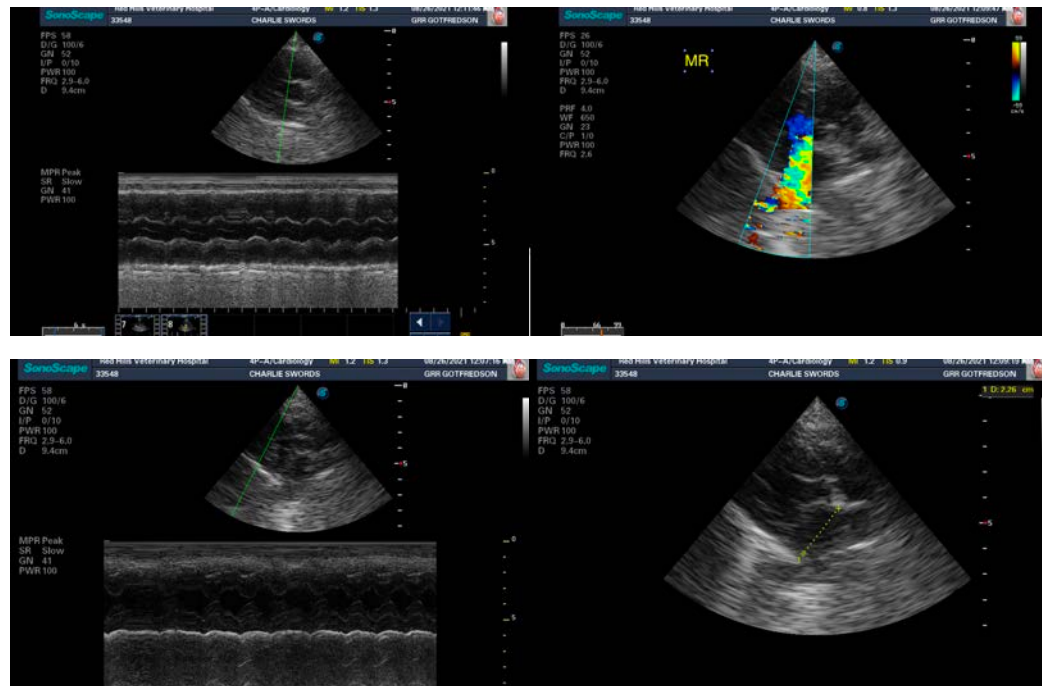
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Eric Lindquist**, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com  
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