



PATIENT

Mishka Holem

SPECIES

Canine

BREED

Lab Mix

SEX

Spayed Female

AGE

5 years

WEIGHT

36 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Gromalak

HOSPITAL NAME

SVS Imaging

REFERRING VET

Dr. Scarbeck

INVOICE

12366

DATE

10/18/21

PRESENTING CLINICAL SIGNS

Seen at PVG on 9/11/21 for possible bee sting. Exam findings and abnormal lab values: Grade II systolic murmur noted on exam. Bloodwork is normal. Question you want answered with an ultrasound: Cause of murmur

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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	1.4	26.3	52.7	0.45
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	BELOW	BELOW	BELOW	BELOW
PATIENT	145	1.86	0.93		3.1	3.42	

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 mildly subnormal 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.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Normal echocardiogram with mild subnormal contractility



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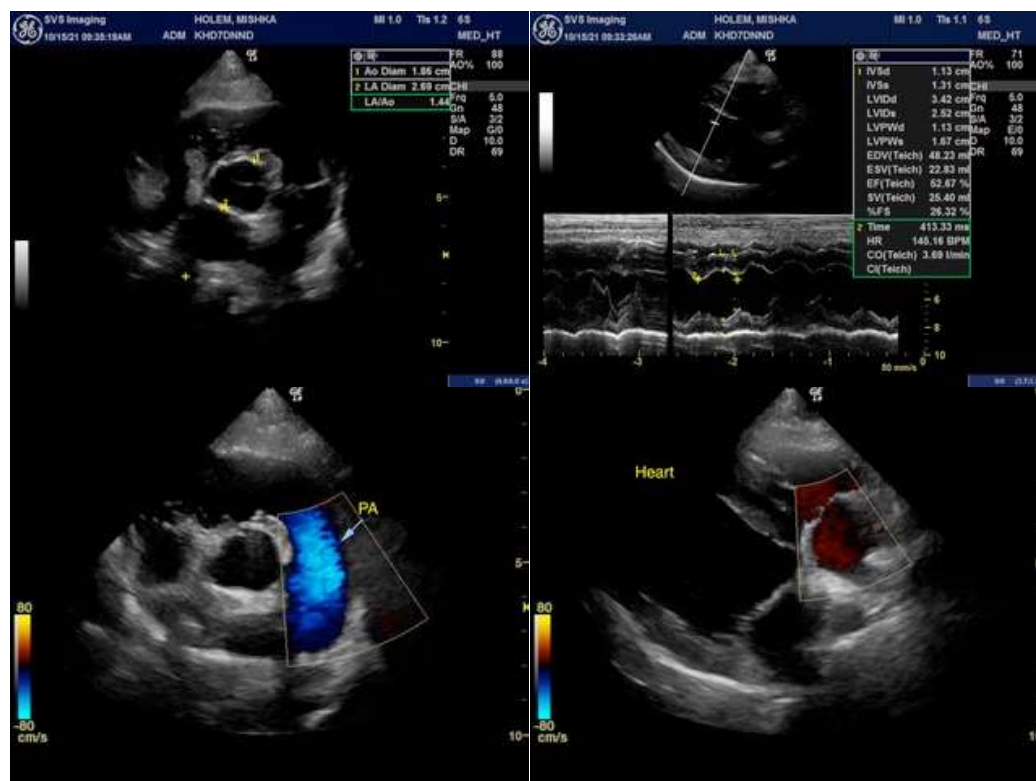
DATE

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overtly normal cardiac structure with no definitive cause of the murmur identified. No evidence of significant valvular insufficiencies, stenotic disease, shunt, or clinical pulmonary hypertension was noted. Given the lack of dehydration or anemia, possibilities may include physiologic flow murmur or small flow abnormality not seen here. The mild subnormal left ventricle contractility is nonspecific and may be a normal patient variant or secondary to athletic state, given the normal recent blood work without evidence of systemic disease. Assessment of T4 levels is recommended if not performed. DCM criteria is not met.

Given the lack of reported clinical signs, as well as lack of left or right heart chamber enlargement, conservative monitoring of the murmur would be appropriate. Recheck echocardiogram is suggested in 6 months, sooner if clinical signs consistent with heart disease are noted or if murmur intensity increased.





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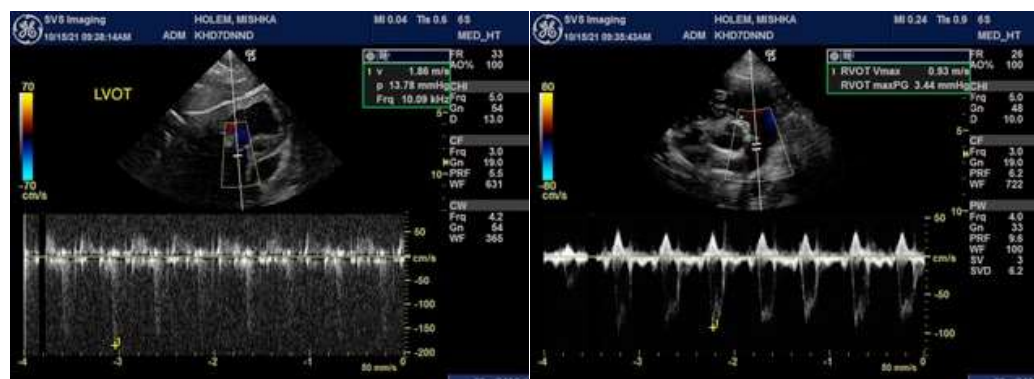
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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 info@SonoPath.com