



**PATIENT PRESENTING CLINICAL SIGNS**

Gage Kiehl

**SPECIES**

Canine

**BREED**

Miniature Schnauzer

History: Gage presented for cardiac diagnostics for worsening congestive heart failure. He is currently on the following medications: 6.25mg furosemide a.m., 12.5mg mid-day and 12.5mg p.m., 12.5mg spironolactone q 24 hours, 2.5mg Enalapril q 12 hours, and 1.25mg Pimobendan q 12 hours. He was given 1.3mg Butorphanol light sedation for the cardiac ultrasound, and his BP was normal today, ranging from 107/61 (77) to 114/56 (78) mmHg systolic/diastolic (MAP). He had a previous cardiac ultrasound study submitted to Sonopath June 17, 2021 and MMVD was staged at B2. Abnormal PE/Chem/CBC/UA Results: Labwork 12/7/21 revealed slightly elevated ALT of 191 and slightly elevated BUN of 33.

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

**SEX**

Neutered male

**AGE**

13 years

**WEIGHT**

13.8 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

The echocardiogram in this patient revealed a slightly enlarged **left atrium** based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Prolapse of the anterior mitral valve leaflet was noted. Doppler indicated measurable 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 or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology. 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.

**IMAGING PERFORMED BY**

Dr. McFeely

**HOSPITAL NAME**

Straley VA

**REFERRING VET**

Dr. McFeely

**INVOICE**

94626

**DATE**

12/14/21

CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
<b>CARDIAC</b>	<b>VMAX</b>	<b>VMAX</b>	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
<b>PARAMETERS</b>	(m/s)	(m/s)					
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
<b>PATIENT</b>			1.4	1.4			0.1
CANINE	HR	AV	PV	BODY WEIGHT	LA	LVIDd	LVIDs
<b>CARDIAC</b>	(BPM)	<b>VMAX</b>	<b>MAX</b>		2D short axis Base view	Avg; 2D and m-mode short axis	Avg; 2D and m-mode short axis
<b>PARAMETERS</b>		(m/s)	(m/s)		(cm)	(cm)	(cm)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6				
<b>PATIENT</b>			0.7	13.8 lbs	3.3	3.5	



**PATIENT**

Gage Kiehl

**ULTRASONOGRAPHIC FINDINGS**

Stable canine valvular disease, slight residual left atrial enlargement.

**SPECIES**

Canine

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

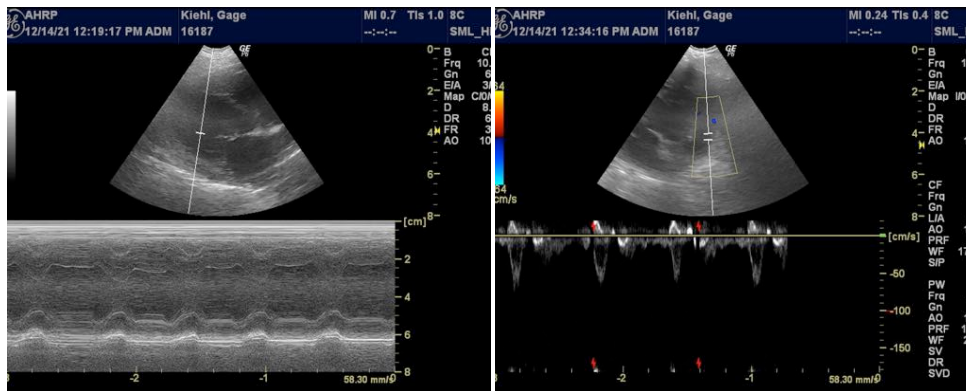
I recommend maintaining the current protocol. A recheck echocardiogram is recommended in 6 months or earlier if murmur grade increases or clinical signs progress. Even though mitral valve prolapse is present and the left atrium is slightly enlarged, I do not believe that the patient should be having any significant clinical signs related to the cardiac presentation at the time of the echocardiogram.

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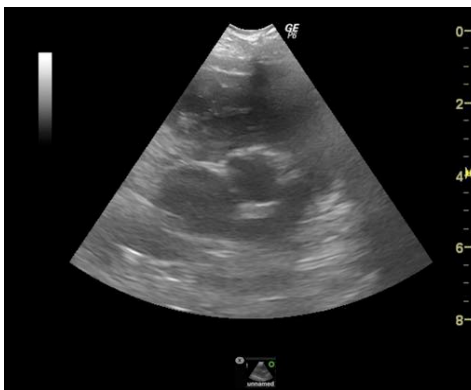
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**PATIENT**

Gage Kiehl

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.

**SPECIES**

Canine

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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Miniature Schnauzer

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

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