



**PATIENT PRESENTING CLINICAL SIGNS**

Joe Kennedy

**SPECIES**

Canine

**BREED**

Chihuahua

History: Echocardiogram performed elsewhere 6 months ago, rechecking now prior to dental anesthesia. -3/22 POVS Echo findings: Moderate to severe mitral regurgitant jet with moderate to severe left atrial dilation mitral valve thickening/ endocardiosis mild tricuspid regurgitant jet no right heart enlargement, pericardial effusion, mass no evidence pulmonary hypertension Occasional cough noted by owner first thing in AM and last thing PM. Current meds: Gabapentin 100 mg SID PM NeoPolyDex susp 1-2 gtt OU BID Vetmedin 2.5 mg 1/2 tab BID Furosemide 12.5 mg 1/2 tab BID Other diagnostics: BP 118/98 MAP 101, Thoracic 3 view rads and ECG sent for interpretation to Idexx Abnormal PE/Chem/CBC/UA Results: Chronic heart murmur PMI L apical grade 5/6. Irregularly irregular arrhythmia. Obese. Exercise intolerance. Bradycardia noted at previous exam 8/29. Today HR 151.

**SEX ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

Neutered male

**AGE**

10 years

**WEIGHT**

6.45 kg

**INTERPRETED BY**

Eric Lindquist, DMV DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Stegemoller

**HOSPITAL NAME**

North Idaho AH

**REFERRING VET**

Dr. Mehra

**INVOICE**

39968

**DATE**

10/6/22

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 vegetative thickening consistent with endocardiosis. Prolapse of the anterior mitral valve leaflet was noted. Doppler indicated measurable insufficiency. The **left ventricle** presented normal 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. Periodic arrhythmia was noted in this patient. The hepatic veins were not dilated on liver sweep.

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	2.2		1.8	2.2			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	BELOW	BELOW	BELOW	BELOW
PATIENT			1.2	6.45 kg	3.9	3.05	



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**ULTRASONOGRAPHIC FINDINGS**

Stage B2 valvular disease.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

There is moderate anesthetic risk. Given the volume overload arrhythmogenic activity was also noted and should be assessed via EKG. Given the current treatment of Vetmedin and Furosemide I recommend adding ace inhibitor at 0.5 mg/kg s.i.d. progressing to b.i.d. and Spironolactone at 1-2 mg/kg b.i.d. with a recheck echocardiogram in 2 weeks. The patient may be in C1 status prior to treatment depending on prior echocardiogram findings. However, volume overload is still fairly significant in the left ventricle and left atrium.

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Chihuahua

**SEX**

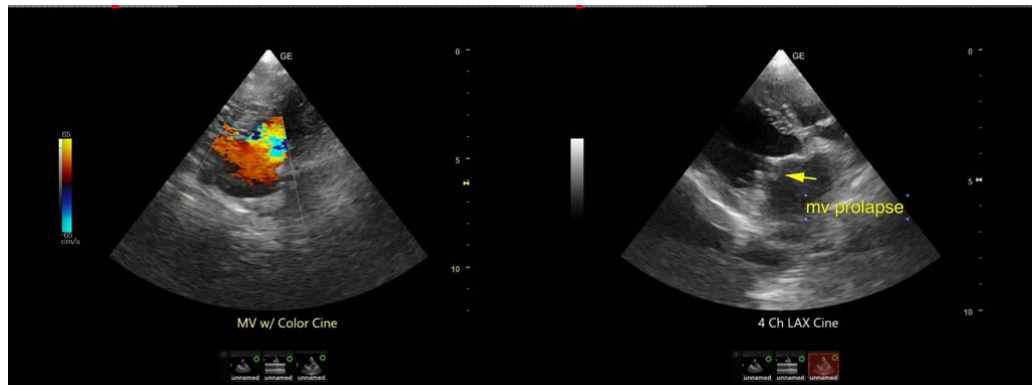
Neutered male

**AGE**

10 years

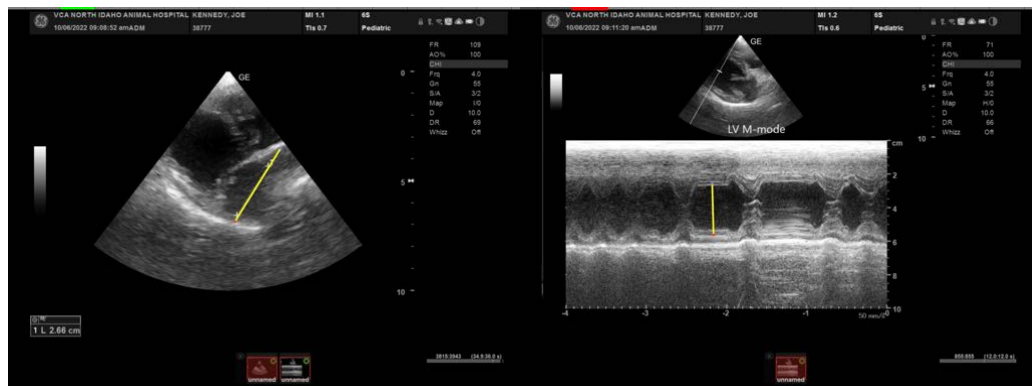
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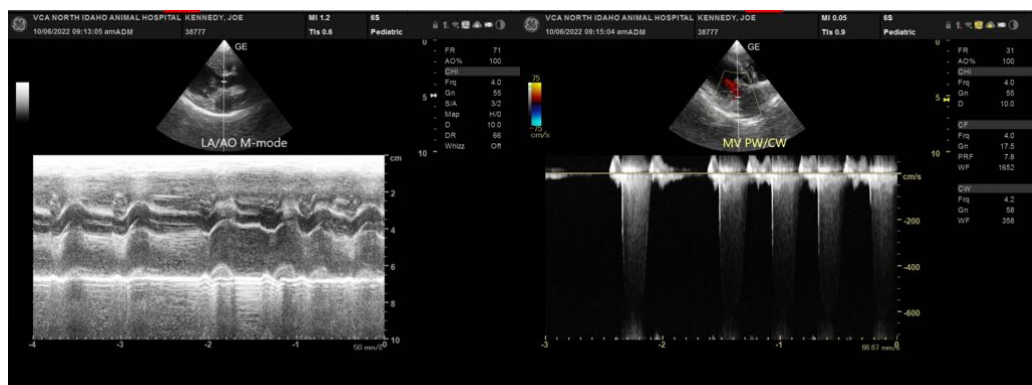
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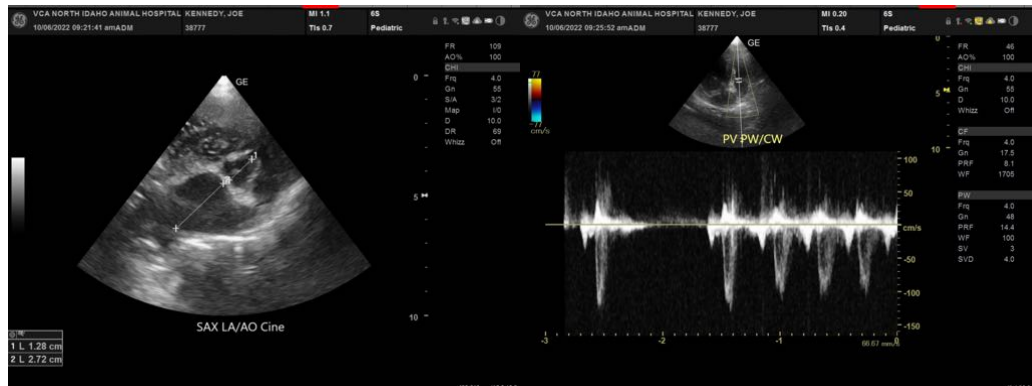
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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