
PATIENT PRESENTING CLINICAL SIGNS

Kona Moeller

coughing, concern for possible mass in the mediastinal area currently on meloxicam and gabapentin

ULTRASONOGRAPHIC EXAMINATION OF THE HEART
SPECIES

Canine

BREED

Akita X

SEX

FS

AGE

14 Years

WEIGHT

20kg

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	5.0	2.4	--	2.1	39.1	72.9	0.3
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	168	1.3	0.8		6.0	2.8	

INTERPRETED BY

 R. McKenzie Daniel,
 DVM, DABVP

**IMAGING
PERFORMED BY**

Kelly Reshny, RVT

HOSPITAL NAME

 Westoak Animal
 Hospital

REFERRING VET

Kohlmaier

INVOICE

48120

DATE

11-1-21

Cardiac Presentation

The echocardiogram in this patient demonstrated moderate to severe **left atrial** enlargement based on 3 different LA measurement methods. Deviation of the interatrial septum towards the right atrium indicative of elevated left atrial pressure was present. The cranial and caudal **mitral** valve leaflets presented mild vegetative thickening suggestive of endocardiosis. Doppler indicated measurable eccentric insufficiency. The **left ventricle** presented thicknesses with linear contour with increased left ventricle volume. 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 primarily adequate linear morphology with insufficiency noted on Color Doppler assessment. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed overall normal valve structure, laminar systolic flow, and diameter (approx. 1:1 pa/ao ratio) with insufficiency noted on Color Doppler assessment. No visible **pericardial** fluid was noted yet a mild amount of free pleural fluid was present. No echographically detectable evidence of infiltrative cardiac disease was visible while no overt masses noted in the **mediastinum and pericardial regions** were overtly evident.



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ULTRASONOGRAPHIC FINDINGS

- Moderate severe left atrium enlargement with concurrent increased left ventricle volume - consistent with left heart volume overload.
- Eccentric mitral valve insufficiency.
- Tricuspid and pulmonic valve insufficiency - estimated pulmonary pressure gradient consistent with mildly elevated pulmonary pressures yet not overtly suggestive of clinical pulmonary hypertension.
- Mild pleural effusion.

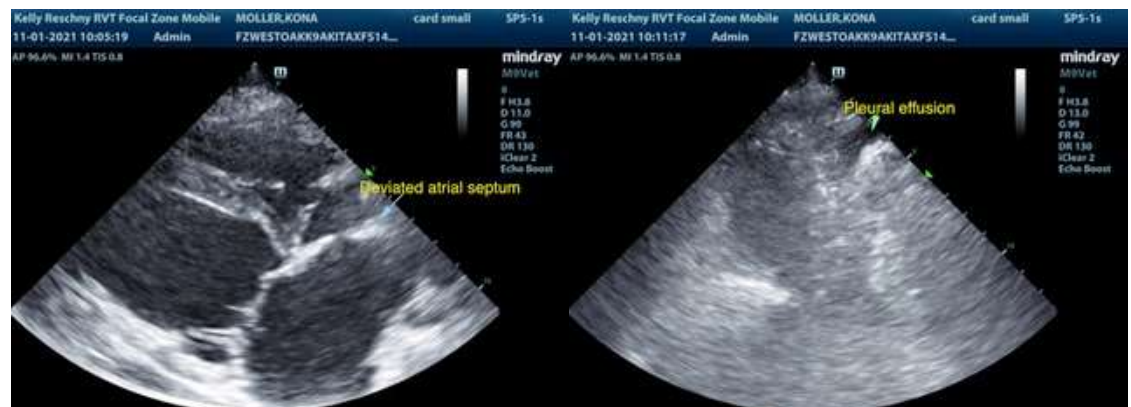
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the eccentric mitral valve insufficiency with overall normal fractional shortening, the presentation of the heart may suggest primary (largely) chronic mitral valve disease. The heart did not overtly meet DCM criteria; however, potential cardiomyopathy owing to metabolic disease, grain-free/boutique diets or other cardiomyopathy may potentially present in this manner. Correlation with full labwork and diet history may be considered if clinically indicated. Regardless of classification, the degree of left atrium enlargement and left heart volume overload indicate that the risk of current and future complication going forward is elevated with suspected cardiogenic pleural effusion.

Recommend Pimobendan 0.3mg/kg po bid, furosemide / spironolactone combination 1.0-2.0mg/kg po bid for both medications +/- ace inhibitor at 0.5mg/kg po bid pending blood pressure assessment and assuming blood pressure greater than 130.

Monitoring of renal parameters as well as ECG assessment suggested.

Recheck echocardiogram suggested in 3-4 months or sooner if continued clinical signs such as persistent to increasing effusion, increased resting respiration rate, exercise intolerance, or syncope are noted.





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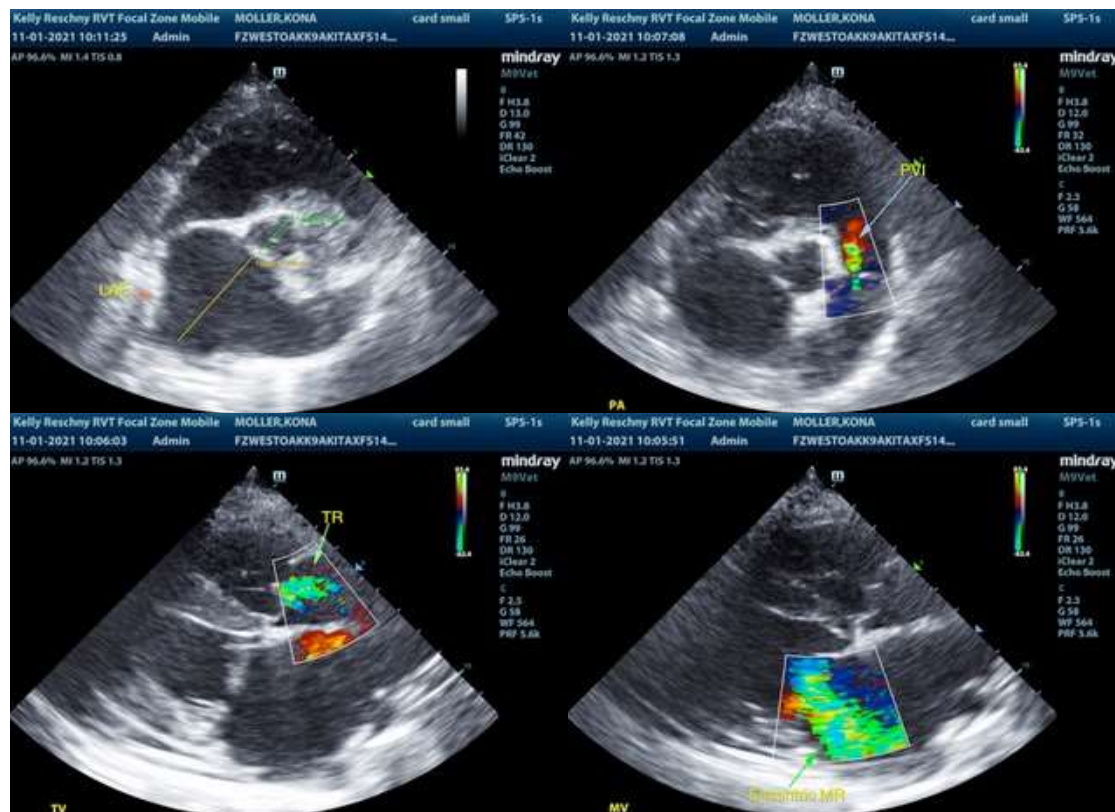
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

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