



PATIENT PRESENTING CLINICAL SIGNS

Linus Kauffman
Heart murmur - echo for anesthesia risk assessment
Abnormal PE/Chem/CBC/UA Results: Pending

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART

Canine

BREED

Lab X

SEX

Neutered Male

AGE

15 Years

WEIGHT

32.4 Pounds

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	5.4	<2.0	1.28	1.26	48.2	80.6	0.33
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	143	1.2	0.9		4.0	3.5	

Cardiac Presentation

INTERPRETED BY

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

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Newton Vet Hospital

REFERRING VET

Dr. Verhalen

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 minor vegetative thickening consistent with endocardiosis. Doppler indicated measurable eccentric 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.

ULTRASONOGRAPHIC FINDINGS

- Mitral valve insufficiency
- Normal left atrium and left ventricle size

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

DATE

8/31/21

The cause of the murmur is minor chronic degenerative valvular changes with secondary eccentric mitral insufficiency. The lack of left atrium enlargement indicates that the risk of future complication is relatively low, yet the prognosis at this stage is highly variable with potential for more rapid progression



PATIENT

Linus Kauffman

of mitral valve disease in larger breed dogs. No other clinical issues such as systolic dysfunction or clinical pulmonary hypertension were noted. Given the lack of left atrial enlargement or left ventricular increased volume, no indication for cardiac medications at this time. No overt anesthetic contraindications, although the patient may potentially be more at risk for fluid overload. The following anesthetic protocol would be appropriate with judicious to appropriate IV fluid use while under anesthesia.

SPECIES

Canine

Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.

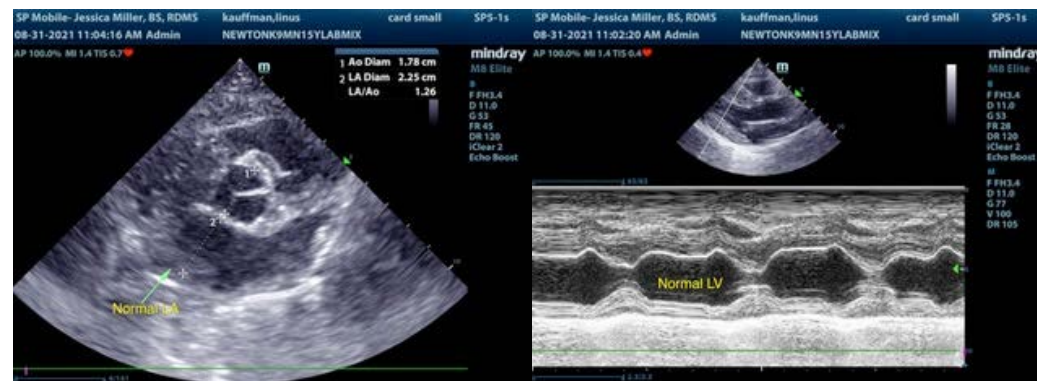
BREED

Lab X

Recheck echocardiogram suggested in 6 months, sooner if clinical signs consistent with heart disease are noted in order to assess for evidence of progression.

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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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DATE

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