



PATIENT

Mia King

SPECIES

Canine

BREED

Maltese

SEX

FS

AGE

14 years

WEIGHT

7.6 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Sova AH

REFERRING VET

Dr. Bott-Wentworth

INVOICE

16308

DATE

2/24/23

PRESENTING CLINICAL SIGNS

Grade 5/6 heart murmur, ascites, cachexia, last echo performed March 2022, panting HR 144, BCS 2/9 with 4/9 ideal. Current meds: Pimobendan 5 mgs 1/4 tab q 12 hr, Denamarin 1 hr prior to breakfast, enalapril 2.5 mgs 1/2 tab SID, clindamycin.

Abnormal PE/Chem/CBC/UA Results: BUN/creat. ratio elevated @38 (normal is 4-27). USG 1.040.

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	<1.3	28-40	40-100	<0.6
PATIENT	5.0	<2.0	1.9	2.2	42	75	0.2
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	123	1.1	0.7		2.9	2.7	

Cardiac Presentation

The echocardiogram in this patient demonstrated moderately increased **left atrial** size based on 3 different LA measurement methods. Minor deviation of the interatrial septum towards the right atrium, suggestive of minor increased left atrial pressure, was present. The cranial and caudal **mitral** valve leaflets presented moderate thickening consistent with endocardiosis (anterior > posterior) with mild anterior leaflet prolapse. No overt chordae tendineae rupture. Doppler indicated measurable moderate insufficiency. The **left ventricle** presented normal thicknesses with linear contour with moderately increased LV 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 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



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infiltrative disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window. No evidence of arrhythmia was noted.

ULTRASONOGRAPHIC FINDINGS

- Progressive chronic mitral valve disease (ACVIM B2-C)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

This study is consistent with progressive chronic mitral valve disease with increased LA / LV size compared to the previous echo. No overt evidence of clinical pulmonary hypertension with adequate LV function.

Continued Pimobendan with the addition of diuretic protocol including Lasix / Spironolactone both 1.0-2.0 mg/kg PO BID is recommended. Continued ACD inhibitor medication is suggested if systemic BP > 130. Given the potential for early renal disease, serial monitoring of renal parameters on diuretic therapy is recommended. Monitoring of ECG is suggested to assess for possible arrhythmia given the LA enlargement. A guarded long-term prognosis, pending response to added diuretic therapy, is warranted. No overt evidence of hepatic congestive criteria or cranial abdominal ascites on brief cranial abdominal views. Recheck echo is recommended in 6 months, sooner if signs of progressive CHF.

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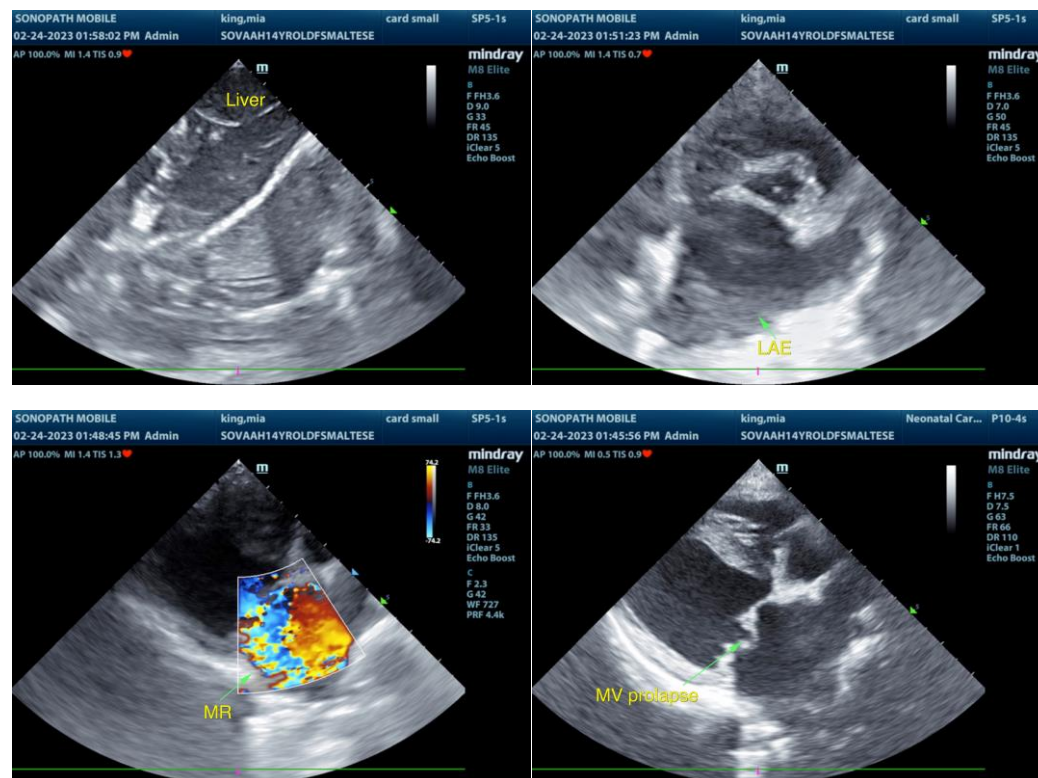
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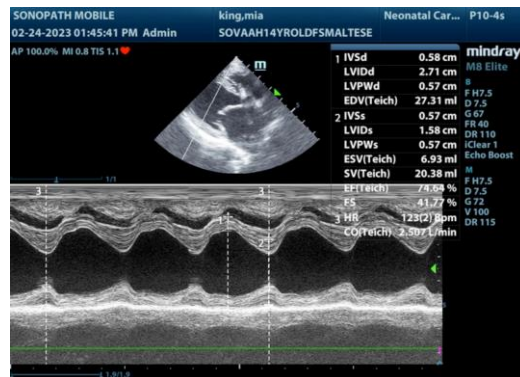
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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