



## PATIENT

Oonagh King

## SPECIES

Canine

## BREED

Bearded Collie

## SEX

FS

## AGE

13 years

## WEIGHT

62 lbs.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Shari Reffi, CVT

## HOSPITAL NAME

Morris Hills VC

## REFERRING VET

Dr. Hirshenson

## INVOICE

14243

## DATE

7/7/22

## PRESENTING CLINICAL SIGNS

-Chronic progressive cough w/ & w/out exercise. Non responsive to Abx. Muffled heart sounds, eats grain free diet. Current meds: Clavamox 375mg bid. U/S sedation-Torb

Abnormal PE/Chem/CBC/UA Results: Bun 32, TP 6.1, Alb 2.3, Cardiopet Bnp >869, U/A-UTI-wbc >50, rbc >50 /hpf, USG 1.030

## 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	6.2	2.4		1.84	35.2	64.0	0.26
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	90	1.7	1.1		5.4	5.3	

## Cardiac Presentation

The echocardiogram in this patient demonstrated moderately enlarged **left atrial** size based on 3 different LA measurement methods. Mild deviation of the interatrial septum towards the right atrium suggestive of increased left atrial pressure was present. The cranial and caudal **mitral** valve leaflets presented vegetative thickening suggestive of endocardiosis without evidence of valvular prolapse or chordae tendinea rupture. Doppler indicated measurable moderate centralized eccentric insufficiency. The **left ventricle** presented normal 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 concurrent mild thickening with mild TR on doppler. 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



## PATIENT

Oonagh King

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

## SPECIES

Canine

## ULTRASONOGRAPHIC FINDINGS

## BREED

Bearded Collie

- Chronic mitral valve disease (ACVIM B2, possible stage C)
- Mild TR - estimated pulmonary pressure gradient approximately 25 mmHg suggestive of mild elevated pulmonary pressure, yet not consistent with clinical pulmonary hypertension

## SEX

FS

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

## AGE

13 years

This study is consistent with chronic degenerative valvular changes with secondary primary mitral valve and mild tricuspid valve Insufficiency. The moderate LA enlargement combined with increased left ventricle volume indicates that the current and future risk going forward is at least moderately elevated.

## WEIGHT

62 lbs.

Some contributions of the grain-free diet to the cardiomyopathy cannot be definitively excluded. Taurine levels +/- empirical taurine supplementation would be reasonable. Pimobendan 0.3 mg/kg PO BID with Lasix 1.0-2.0 mg/kg PO BID is warranted. Three view chest radiographs to assess for pulmonary edema, if not done, are suggested. ACE Inhibitor medication could be considered if systemic BP > 130, (not advised if BP < 130).

## INTERPRETED BY

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

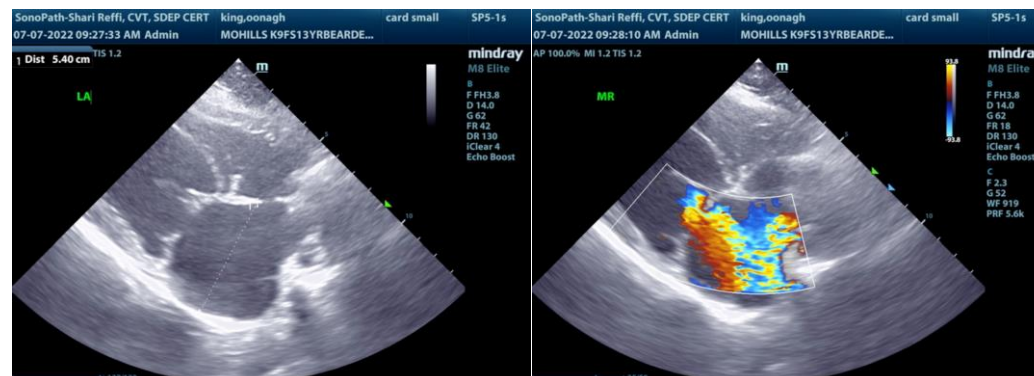
Some contribution of the cough to mainstem bronchi irritation owing to LA enlargement could be possible. Hydrocodone at an appropriate dose may prove beneficial. Prognosis at this stage is highly variable, as this patient is at continued risk for episodes of CHF or potential development of malignant arrhythmias. Sonographic monitoring is required for further prognosis. Recheck echocardiogram is recommended in 4-6 months, sooner if progressive clinical signs are noted. Monitoring of renal parameters and BP +/- ECG for evidence of arrhythmia going forward is recommended.

## IMAGING PERFORMED BY

Shari Reffi, CVT

## HOSPITAL NAME

Morris Hills VC



## REFERRING VET

Dr. Hirshenson

## INVOICE

14243

## DATE

7/7/22


**PATIENT**

Oonagh King

**SPECIES**

Canine

**BREED**

Bearded Collie

**SEX**

FS

**AGE**

13 years

**WEIGHT**

62 lbs.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Shari Reffi, CVT

**HOSPITAL NAME**

Morris Hills VC

**REFERRING VET**

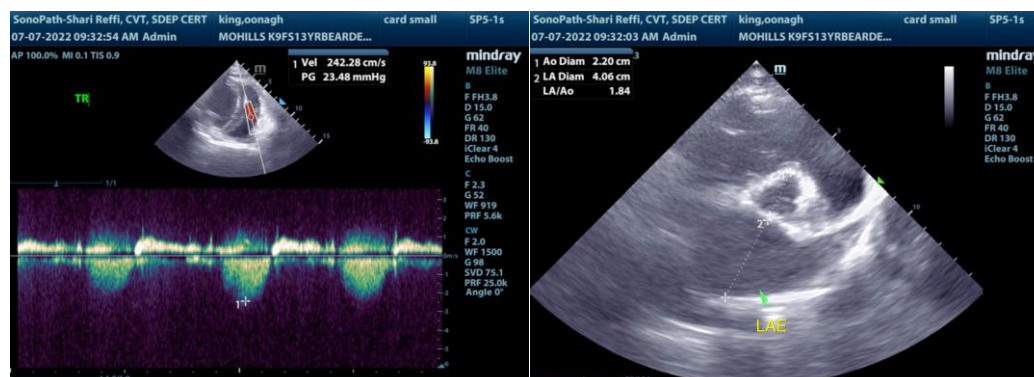
Dr. Hirshenson

**INVOICE**

14243

**DATE**

7/7/22



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)**  
info@SonoPath.com