



## PATIENT PRESENTING CLINICAL SIGNS

Harley Hall History: History of heart disease. Current meds: Enalapril 2.5mg sid, Vetmedin 1.25mg bid  
Abnormal PE/Chem/CBC/UA Results:

## SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART

Canine

### BREED

Cavalier King Charles  
Spaniel

### SEX

Spayed Female

### AGE

11 Years

### WEIGHT

11.4 Lbs.

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	5.1	2.0	2.6	2.6	48.6	80.7	0.25
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	187	1.1	0.8	--	4.8	3.8	--

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Shari Reffi, CVT

## HOSPITAL NAME

Tranquility VC

## REFERRING VET

Dr. Jones

## INVOICE

13060

## DATE

12/14/21

### Cardiac Presentation

The echocardiogram for this patient presented severely excessive **left atrial size** expressed both in the LA/AO and LA max measurements. The intraatrial septum was deviated towards the right atrium, indicative of increased left atrial pressure. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis with mild prolapse as well as the septal leaflet as well as lack of normal valvular coaptation owing to left atrium enlargement. Doppler indicated measurable eccentric insufficiency. The **left ventricle** presented thicknesses with linear contour with increased 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 vegetative thickening with potential for mild valvular prolapse. Color doppler assessment of the tricuspid valve reveal concurrent minor insufficiency.

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



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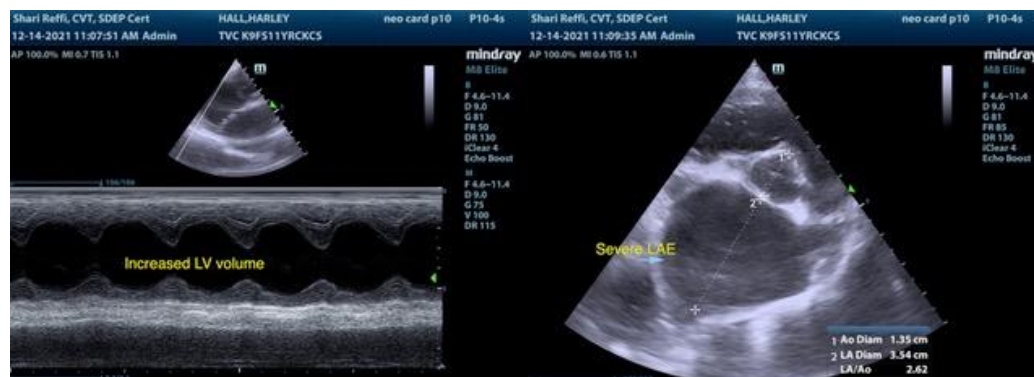
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- Chronic mitral valve disease (ACVIM stage C)
- Mild mitral valve prolapse and lack of normal coaptation
- Mild tricuspid valve insufficiency- estimated pulmonary pressure gradient not overtly consistent with clinical pulmonary hypertension

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The severely enlarged left atrium as well as generalized left heart volume overload indicate that the risk secondary to mitral valve insufficiency as well as the risk going forward is significantly elevated. In addition to current medications, Lasix at 1 mg per kg PO BID as the initial dose, is recommended. Monitoring of renal parameters as well as blood pressure recommended. Baseline monitoring of resting respiration rate at home is suggested with abnormal resting respiration rate >30 breaths/minute. Omega-3 fatty acid supplementation and mild salt restriction may prove beneficial. This patient is at increased anesthetic risk. Recheck echocardiogram suggested in 4-6 months to assess for progression, sooner if clinical signs consistent with congestive left sided heart disease are noted.





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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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