



PATIENT

Joey MacKinnon

SPECIES

Canine

BREED

Chihuahua Mix

SEX

Male Neutered

AGE

13 years

WEIGHT

9.5lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

A. Westcott, DVM

HOSPITAL NAME

Alastair Westcott,
DVM

REFERRING VET

Dr. Westcott

INVOICE

46615

DATE

1/28/26

PRESENTING CLINICAL SIGNS

History: History of stage B2 myxomatous mitral valve disease (MMVD) and a prior left atrial tear, which was managed conservatively and resolved. Pimobendan and Furosemide with discontinued due to GI issues and anecdotal seizure activity. Since discontinuing medications, persistent chronic cough, intermittent exercise intolerance and recent increase in RE. Mild abdominal distension has been noted but was previously attributed to known hepatomegaly/vacuolar hepatopathy. A previously identified non-obstructive cystolith remains a concurrent concern.

-Abnormal PE/Chem/CBC/UA Results: Increased RR and moderate IE. Grade III/VI systolic murmur PMI left apex and possibly right side. Mildly taut abdomen. Cardiomegaly with marked left atrial enlargement. Airways: Widening/splitting of the mainstem bronchi consistent with left atrial enlargement Pulmonary parenchyma: No convincing evidence of cardiogenic pulmonary edema; mild broncho interstitial changes noted near the hilus but not typical of overt CHF Pulmonary vasculature: VD view shows right lobar pulmonary vessel dilation relative to the left, suggesting pulmonary hypertension Interpretation: Significant cardiomegaly with left atrial enlargement and radiographic features supportive of pulmonary hypertension. No clear radiographic pulmonary edema at this time. ECG - Sinus arrhythmia.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with no prolapse into the left atrial lumen. Severe mitral regurgitation with severe left atrial dilation. Mild LV dilation with hyperdynamic myocardial function. The tricuspid valve appears thickened with moderate tricuspid regurgitation. Velocity consistent with moderate PAH. Moderate right heart dilation. MPA and branch dilation. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. Trace aortic and pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses. Ascites seen on subcostal views.

CARDIAC CHART

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	NM	4.0	2.1	2.0	51	84	NM
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	NM	1.1	0.6	4.3	3.0	3.2	1.6
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
BODY WEIGHT DEPENDENT PARAMETERS				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
*Note: All measurements based upon multi-modal images and methods. An average value is reported.				10	1.50 (3.8)	3.27 (3.5)	2.06 (3.1)
				15	1.83 (2.0)	3.71 (2.4)	2.43 (2.1)
				20	2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
				40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
				50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)

Adapted from June Boon, Veterinary Echocardiography, 1998
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435
Hansson et al, Vet Rad and Ultrasound 2002
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995



PATIENT

Joey MacKinnon

SPECIES

Canine

BREED

Chihuahua Mix

SEX

Male Neutered

AGE

13 years

WEIGHT

9.5lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

A. Westcott, DVM

HOSPITAL NAME

Alastair Westcott,
DVM

REFERRING VET

Dr. Westcott

INVOICE

46615

DATE

1/28/26

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Compared to the prior study, there is evidence of progression. The left heart disease is slightly increased comparatively; however, of greater concern the right heart is also now moderately enlarged. Pulmonary pressures have increased, which may be the causative issue. Ascites has now developed, consistent with right-sided CHF.

Given these findings, **full cardiac support is recommended at this stage.** Without diuretic therapy, this patient will succumb in the very near future and euthanasia will have to be elected.

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a worsening cough, labored breathing, exercise intolerance or collapse episodes. Long term prognosis is guarded with risk for development to CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.

Elective anesthesia is not advised, as there is high risk for complication.

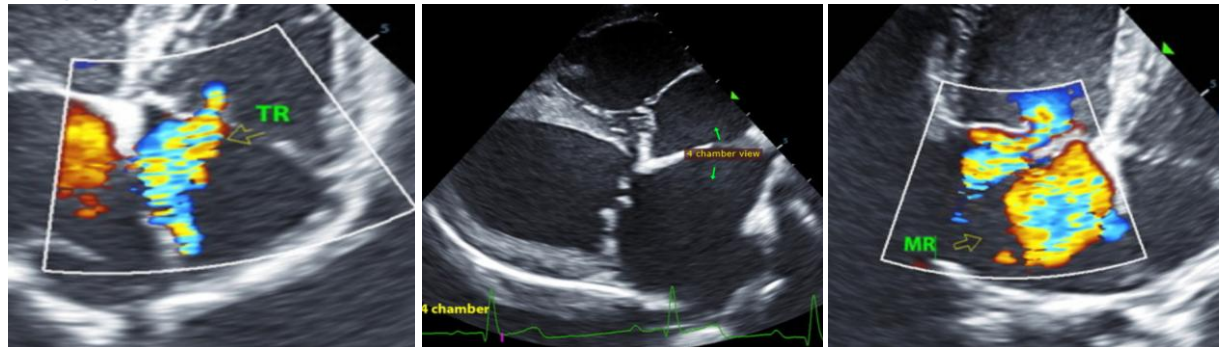
PLAN

Reinstitute Pimobendan 0.3mg/kg PO q8h. Reinstitute Lasix 1-2mg/kg PO q12h. Institute Spironolactone 1-2mg/kg PO q12h. Institute Sildenafil 1-2mg/kg PO q12h. Consider Hydrocodone if needed for quality of life.

Monitor renal panel and BP in 1-2 weeks, then every 3-4 months lifelong. If BP is >130mmHg and patient is doing well, institute ACE-I (benazepril or enalapril) 0.5mg/kg PO q12h.

A recheck echocardiogram is recommended in 6 months to screen for progression, sooner if clinical signs arise.

IMAGES



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. This report was generated using transcription software, and minor dictation errors may be present. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com