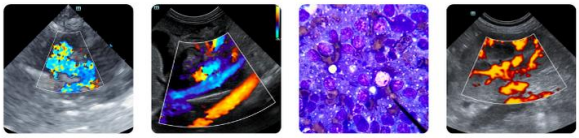


SonoPath FOSTERING THE ART OF VETERINARY MEDICINE™ www.thefocalzone.com info@thefocalzone.com 298.808.2608

PATIENT

Molly Cooney

SPECIES

Canine

BREED

Shih Tzu Mix

SEX

Female Spayed

AGE

14 years

WEIGHT

15.7lbs

INTERPRETED BY

Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY

Amanda Stewart

HOSPITAL NAME

Mundy Vet Services

REFERRING VET

Dr. Williams

INVOICE

46902

DATE

2/19/26

PRESENTING CLINICAL SIGNS

History: Progressive, now grade 5/6 heart murmur. Persistent cough. CXR showed CHF. Started on Furosemide, Vetmedin, Benazepril. Sedated with Torb, Gabapentin and Trazadone.

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only.

Cardiomegaly. No obvious evidence of CHF.

ELECTROCARDIOGRAPHIC FINDINGS

A six lead ECG is available at 25mm/s; 10mm/mV. The average heart rate is 110bpm. The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P wave morphology is positive with a normal dimension. Normal PR. The QRS morphology is positive with normal dimension. MEA is normal. No ectopic beats, pauses or dysrhythmias observed.
ECG diagnosis: Normal sinus rhythm with respiratory variation.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets (anterior>posterior) with prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation with moderate left atrial dilation. Mild LV dilation with hyperdynamic myocardial function. The tricuspid valve appears subjectively normal, with no tricuspid regurgitation. Normal right atrial and ventricular diameter. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic outflow velocities. No aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No cardiac tumors observed.

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	6.0		1.5	1.7	50	82	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	1.5	0.9	7.1	2.3	3.6	1.8
*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)
				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)

Note: All measurements based upon multi-modal images and methods. An average value is reported.

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

Molly Cooney

SPECIES

Canine

BREED

Shih Tzu Mix

SEX

Female Spayed

AGE

14 years

WEIGHT

15.7lbs

INTERPRETED BY

Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY

Amanda Stewart

HOSPITAL NAME

Mundy Vet Services

REFERRING VET

Dr. Williams

INVOICE

46902

DATE

2/19/26

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing moderate mitral regurgitation. Moderate left atrial enlargement indicates there is relatively low risk for imminent complication; however, risk for progression to spontaneous congestive heart failure in the future is elevated. No additional issues are identified. The ECG shows a respiratory sinus arrythmia, consistent with high vagal tone.

This patient was recently suspected to be in CHF; however, these findings would not support this diagnosis. CHF is a clinical and radiographic diagnosis that can only be supported by ultrasound. The radiographs, in my opinion, do not show active congestion; however, a Radiologist review is suggested for further evaluation due to discordant results. If declined and the patient responded favorably to Lasix, it may be reasonable to continue. Otherwise, this is likely unnecessary. A respiratory issue is also supported by high vagal tone, which is suspected in this predisposed breed. Prognosis is guarded long-term. Going forward, patient may be at risk for progression to CHF, malignant arrythmias and/or sudden death going forward.

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a progressive cough, labored breathing, exercise intolerance or collapse episodes.

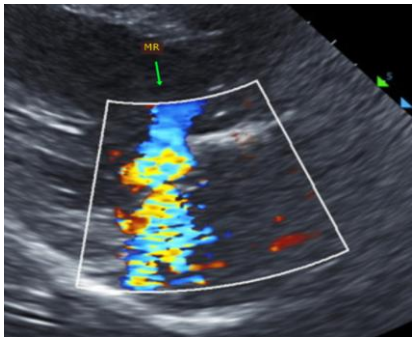
PLAN

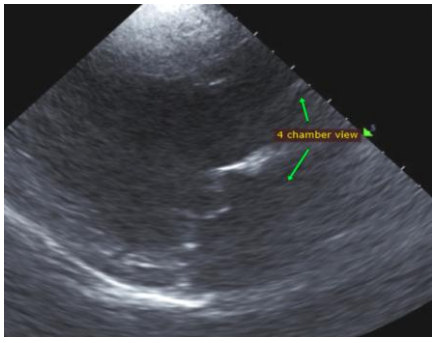
Recommend a Radiologist review to confirm that CHF is not present in this case. If declined and the patient responded to diuretic therapy, reasonable to continue Lasix 1-2mg/kg PO q12h. Regardless, continue Pimobendan 0.3mg/kg PO q12h. Pending BP >130mmHg, continue ACE-I 0.5mg/kg PO q12h. If there is any question, repeat CXR are recommended.

Monitor renal values and BP in 1-2 weeks, then every 3-4 months lifelong.

Recommend monitor for progression with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

IMAGES





PATIENT

Molly Cooney

SPECIES

Canine

BREED

Shih Tzu Mix

SEX

Female Spayed

AGE

14 years

WEIGHT

15.7lbs

INTERPRETED BY

Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY

Amanda Stewart

HOSPITAL NAME

Mundy Vet Services

REFERRING VET

Dr. Williams

INVOICE

46902

DATE

2/19/26

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