



PATIENT

Sugar Caswell

SPECIES

Canine

BREED

Maltese

SEX

Female Spayed

AGE

14 years

WEIGHT

5.3lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

C. Belan, DVM

HOSPITAL NAME

Signal Hill Animal
Hospital

REFERRING VET

Dr. Sweet

INVOICE

32108

DATE

8/2/23

PRESENTING CLINICAL SIGNS

History: New grade 4/6 murmur. New cough. Prescribed pimobendane, furosemide and ace inhibitor and improved. CXR: Concerning for CHF.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with mild prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation with moderate left atrial dilation. Normal MR velocity. Mild LV dilation with hyperdynamic myocardial function. The tricuspid valve appears normal with mild TR. Velocity consistent with early PAH. Normal right atrial and ventricular diameter and morphology. The pulmonic and aortic valves are normal in morphology and mobility. No AI/PI. Normal aortic outflow velocities with laminar flow. No pericardial or pleural effusion noted. No obvious cardiac masses.

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	5.8	2.9	1.4	1.9	59	92	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	BELOW	BELOW	BELOW	BELOW
PATIENT	200	0.95	1.0	2.4	2.1	2.2	0.9
*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)
Adapted from June Boon, Veterinary Echocardiography, 1998				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
Hansson et al, Vet Rad and Ultrasound 2002				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995				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)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing moderate mitral and mild tricuspid regurgitation. Moderate left atrial enlargement indicates the risk for spontaneous congestive heart failure is currently low; however, may be elevated going forward. Early pulmonary hypertension is noted, which should be monitored going forward. No additional issues are noted.

While it is uncommon for moderate valve disease to lead to CHF, if the radiographs showed pulmonary edema and the patient responded to diuretic therapy then this would support the diagnosis and medications should be continued as suggested below. That being said, if there is any question of the diagnosis a Radiologist review of the films is highly recommended. CHF is a radiographic and clinical diagnosis, which can only be supported by echocardiography. This breed is also predisposed to primary airway disease, which can also cause a clinical cough without dyspnea.



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The average survival time of canine patients with active pulmonary edema is 8-9 months on medications, however they generally are able to maintain a good quality of life for that period.

SPECIES

Canine

Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes. Patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future. Serial monitoring of SRRs is recommended as the best way to screen for progression to CHF at home.

BREED

Maltese

Anesthetic risk is considered mildly elevated. Cardiac protective drug choices (opioid/benzodiazepine premedication, Propofol or alfaxalone induction, iso or sevo gas) are recommended. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Judicious IV fluid rates are recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

SEX

Female Spayed

PLAN

Consider Radiologist review of the films to determine if Lasix/ACE-I should be continued. Recommend continue Pimobendan 0.3mg/kg PO q12h. Hydrocodone can be utilized if needed for QOL. Reassess BP as discussed.

AGE

14 years

A recheck renal panel and BP are recommended every 3-4 months lifelong.

WEIGHT

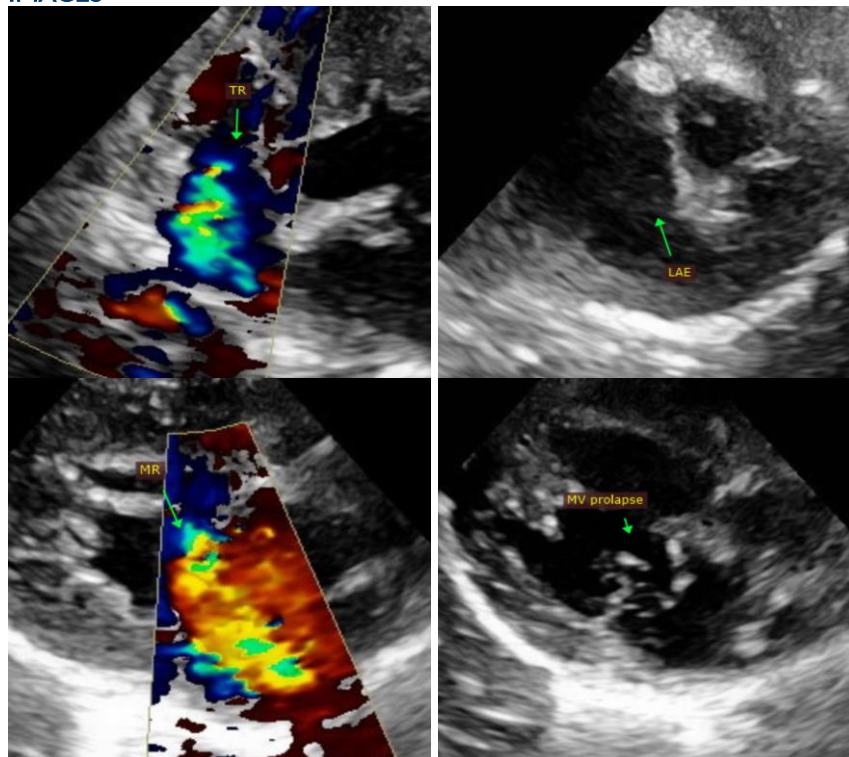
5.3lbs

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

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IMAGES



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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.

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Canine

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.

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Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com

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