



PATIENT

Minimo Morrison

SPECIES

Canine

BREED

Papillon

SEX

Male

AGE

13 years

WEIGHT

5.4lbs

PRESENTING CLINICAL SIGNS

History: Had 2 episodes of syncope in early June. No episodes since then. Grade 4-5/6 murmur.

ELECTROCARDIOGRAPHIC FINDINGS

A six lead ECG is available at 50mm/s; 10mm/mV. The average heart rate is 155bpm (range 100-188bpm). 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. The mitral valve is diffusely thickened with mild prolapse into the left atrial lumen. There is severe eccentric mitral regurgitation present. There is moderate to severe left atrial enlargement. There is mild left ventricular dilation. Left ventricular systolic function is hyperdynamic. There is normal systolic flow velocity across the aortic valve, no insufficiency. The aortic valve appears normal. Mild right atrial/ventricular enlargement (subjective). The tricuspid valve is mildly thickened with trivial tricuspid regurgitation. The tricuspid regurgitant velocity is consistent with moderate pulmonary hypertension. The pulmonary artery is significantly dilated. Mild PI with an elevated velocity. No pericardial/pleural effusion or cardiac masses are seen.

CARDIAC CHART

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Loetitia St-Jacques,
LVT/RVT

HOSPITAL NAME

Roundhill Animal
Hospital

REFERRING VET

Dr. Kelly

INVOICE

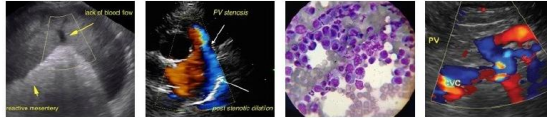
25041

DATE

6/28/22

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	5.7	4.0	NM	2.5	66	96	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	1.0	0.9	2.5	2.2	2.7	0.9
*Normal chamber parameters expressed as a mean value (SD)							
BODY WEIGHT DEPENDENT PARAMETERS							
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>							
				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
				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)

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



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing severe mitral and trivial tricuspid regurgitation. Moderate to severe left atrial enlargement indicates there may be elevated risk for spontaneous congestive heart failure in the future. Significant pulmonary hypertension is also identified with severe MPA dilation; however, the right heart is only mildly affected. Given the combination of findings and episodes of collapse, I would institute Pimobendan and Sildenafil at this time in this patient as below. Given that significant time has passed with no recurrent issues, no additional medications are warranted at this time. That being said, if any respiratory signs develop, I would not hesitate to institute full cardiac support.

Syncope in this patient is likely due to a combination of insufficient cardiac output and pulmonary hypertension. Early CHF cannot be ruled out but there are no respiratory signs noted. The ECG is unremarkable with a normal sinus rhythm. A baseline BP is recommended.

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.

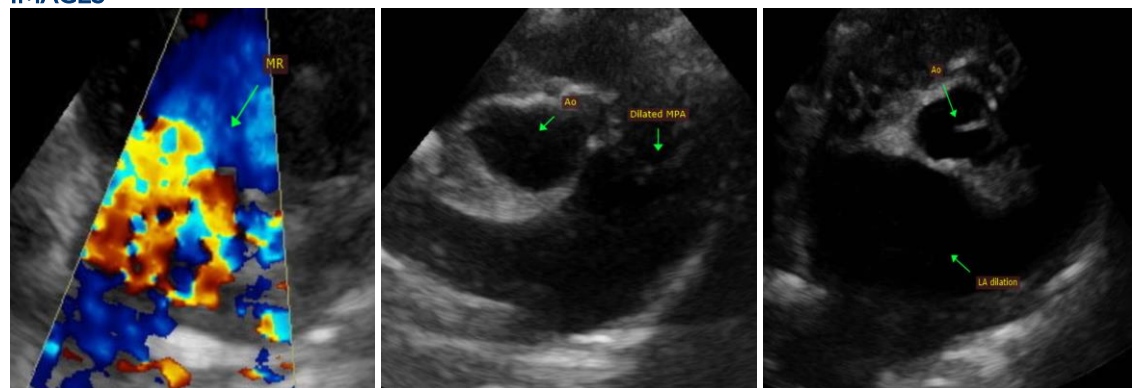
Elective anesthesia is not advised.

PLAN

Institute heart muscle support Pimobendan 0.25-0.3mg/kg PO BID. Institute Sildenafil 1-2mg/kg PO q12h. Baseline BP. If any respiratory signs develop, CXR are recommended with Radiologist review. If any respiratory signs develop institute Lasix (1-2mg/kg PO q12h) and Spironolactone (1-2mg/kg PO q12h).

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

IMAGES





Portable Animal Western Sonography, Inc.

IMAGING PERFORMED BY

pawsonography@gmail.com  530-786-8340

PATIENT

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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.

SPECIES

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.

BREED

Papillon

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

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