



PATIENT

Vinny Mayer

SPECIES

Canine

BREED

Chihuahua

SEX

Male

AGE

9 years

WEIGHT

6.74lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Loetitia St-Jacques,
LVT/RVT

HOSPITAL NAME

Brighton Greens
Veterinary Hospital

REFERRING VET

Dr. Janeway

INVOICE

20944

DATE

9/8/21

PRESENTING CLINICAL SIGNS

History: Grade 4/6 bilateral systolic murmur. Assess prior to dental.

-ECG report: Normal.

-Abnormal lab results: Globulins mild increase 4.4, calcium marginal decrease 8.8, PSL low, WBC increased 23.6, neut 15576, lympho 5428, mono 1888, UA 1+ proteinuria and sperm, fecal negative, HW/tick borne disease test negative.

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. The MR velocity is low normal. There is marked left atrial enlargement. There is severe left ventricular dilation indicative of volume overload. Left ventricular systolic function is hyperdynamic. There is normal systolic flow velocity across the aortic valve. The aortic valve appears trileaflet with normal mobility. The main pulmonary artery is mildly dilated. Normal pulmonic outflow velocity with laminar profile. Trace pulmonic insufficiency. Mild right atrial and right ventricular dilation. The tricuspid valve is thickened with mild tricuspid regurgitation. The tricuspid regurgitant velocity is elevated, indicative of pulmonary hypertension (measured at 60mmHg). No obvious pericardial effusion. Scant pleural effusion. Hepatic congestion seen on subcoastal views. No cardiac masses are seen.

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	4.4	4.0	NM	2.9	36	68	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	0.9	0.75	3.1	3.4	3.3	2.1
*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)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>				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 mild tricuspid regurgitation. Severe biatrial and ventricular enlargement in addition to severe CVD and moderate pulmonary hypertension indicates the risk for spontaneous congestive heart failure is high and scant effusion is likely reflective of CHF.

Right-sided CHF is somewhat surprising given only moderate pulmonary hypertension and may be explained by primary right heart failure in addition to this degree of pressure overload. Regardless, cardiac supportive medications are indicated as below. If the patient becomes unstable at any point, immediate hospitalization is recommended.

Unfortunately, with this degree of heart disease and congestion, the prognosis is guarded to poor with an average survival time of <6-12mo at this point. Most dogs are able to maintain a good quality of life for some time however with medications. Going forward, patient will remain at high risk for recurrent CHF (left or right sided), collapse episodes and/or development of malignant arrhythmias/left atrial tear/sudden death in the future. Periodic centesis is recommended if the patient experiences discomfort, drop in appetite or labored breathing.

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit once stabilized. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes. Monitoring of sleeping breathing rates is recommended as the best way to screen for improvement/recurrent CHF at home.

Elective anesthesia is not advised.

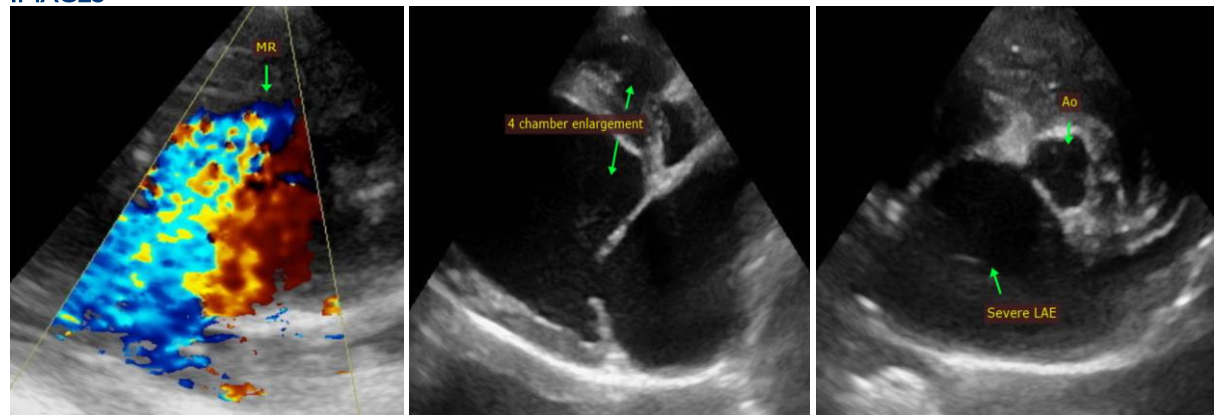
PLAN

Institute Pimobendan 0.3mg/kg PO q12h. Institute Furosemide 1-2mg/kg PO q12h. Institute spironolactone 1-2mg/kg PO q12h. Institute Sildenafil 1-2mg/kg PO q12h.

Monitor SRRs at home. Monitor renal values and BP in 1-2 weeks, then every 3-4 months while on diuretics. If doing well and BP >130mmHg, institute ACEI 0.5mg/kg PO q12h.

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

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.

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