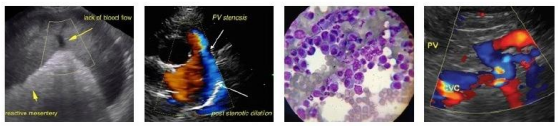
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT
Matix Lyons

SPECIES
Canine

BREED
Boston Terrier

SEX
Male Neutered

AGE
10 years

WEIGHT
24lbs

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. Murphy

INVOICE
29024

DATE
2/15/23

PRESENTING CLINICAL SIGNS

History: Recheck echo. Doing well. BP: 180mmHg.
-Current medications: Vetmedin 5mg am, 2.5mg mid-day and pm, Heartgard monthly, Lasix 25mg PO BID, Benazepril 5mg PO BID, Spironolactone 12.5mg PO BID ,Hydrocodone 5mg 1/2TTID as needed, Denamarin 225mg 1TSID K/D diet.
-Abnormal PE/Chem/CBC/UA Results (11/22): AST 75, ALT 333, BUN 55, Cr 1.8, TG 338, increased platelets from lipemia.
-Pertinent previous echo findings (7/2022 MML): Severe MR, severe LAE, moderate LVE, mild TR, mild RAE: 3.0m/s. LA: 4.0, LV: 4.4/1.9.

ELECTROCARDIOGRAPHIC FINDINGS

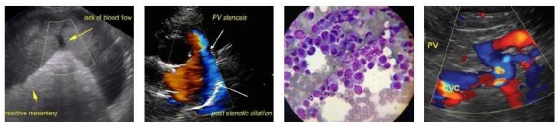
A six lead ECG is available at 50mm/s; 10mm/mV. The average heart rate is 140bpm (range 107-166bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P wave morphology is positive with a normal dimension. Normal PR. The QRS morphology is positive with normal dimension. MEA is normal. Tall R waves. A single APC is identified. No ventricular premature beats, pauses or other dysrhythmias observed.
ECG diagnosis: Normal sinus rhythm with tall R waves. A single APC.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Severe diffuse nodular thickening of mitral valve leaflets (anterior>posterior). Mild prolapse into the left atrial lumen. Severe eccentric mitral regurgitation with severe left atrial enlargement. MR velocity is elevated. Moderate LV dilation with hyperdynamic myocardial function and evidence of volume overload. The tricuspid valve appears mildly thickened and prolapsing with mild tricuspid regurgitation. Velocity is borderline normal. Mild right heart enlargement. The pulmonic and aortic valves appear normal in appearance and mobility. Normal pulmonic and aortic outflow velocities. No aortic and trivial pulmonic insufficiency noted. No pericardial or pleural effusion 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	6.3	2.7	NM	2.9	62	91	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	120	1.5	1.4	10.9	3.9	4.7	2.4
*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 **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				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)



PATIENT
Matix Lyons

SPECIES
Canine

BREED
Boston Terrier

SEX
Male Neutered

AGE
10 years

WEIGHT
24lbs

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. Murphy

INVOICE
29024

DATE
2/15/23

Hansson et al, Vet Rad and Ultrasound 2002 Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995	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)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease persists with continued stability. Severe MR and mild TR are unchanged without progressive left or right heart enlargement. Pulmonary pressures are stable and no additional issues are identified.

The ECG does show a single APC, which is not surprising given the degree of disease and a stressful situation. A single isolated abnormality is of little concern; however, this patient is at high risk for atrial fibrillation. Monitor for signs of this development, including acute lethargy or collapse.

Given these findings, continue all medications as prescribed. Continue to monitor renal values and BP every 3-4 months. The BP is elevated; however, without obvious progression or markers of SHT this is likely a stress response. Continued monitoring is advised.

Omega fatty acid supplementation and mild salt restriction continue to be recommended. Monitor for development of a progressive cough, labored breathing, exercise intolerance or worsening collapse episodes. Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF at home. Prognosis is poor once CHF develops with an average survival time of <1 year. Patient will always be at risk for recurrent CHF, development of arrythmias and/or sudden death in the future.

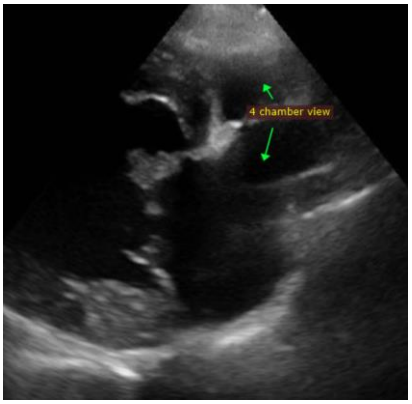
PLAN

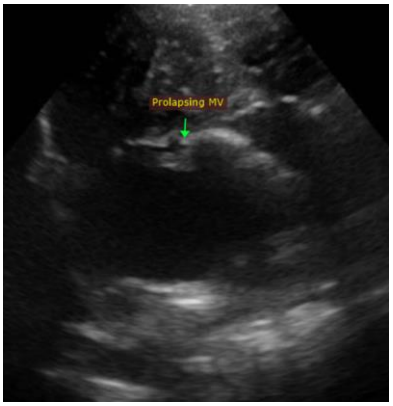
Continue 4 medications as prescribed.

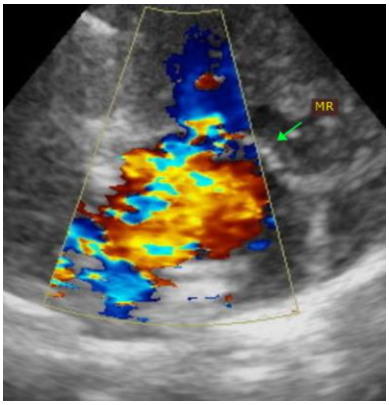
Monitor renal values/BP every 3-4 months lifelong.

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

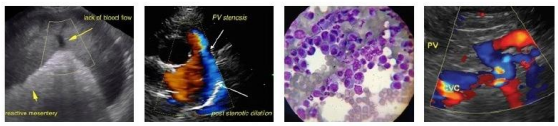
IMAGES







SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT
Matix Lyons

SPECIES
Canine

BREED
Boston Terrier

SEX
Male Neutered

AGE
10 years

WEIGHT
24lbs

INTERPRETED BY
Maggie Machen Lamy, DVM, DACVIM (Cardiology)

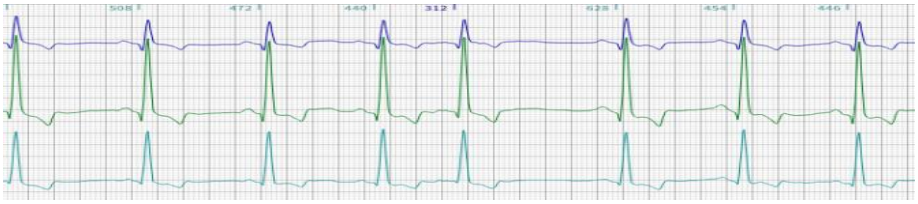
IMAGING PERFORMED BY
Loetitia St-Jacques, LVT/RVT

HOSPITAL NAME
Brighton Greens Veterinary Hospital

REFERRING VET
Dr. Murphy

INVOICE
29024

DATE
2/15/23



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