



PATIENT

Teakah Gotch-Mitchell

SPECIES

Canine

BREED

Doberman

SEX

Female Spayed

AGE

6 years

WEIGHT

30.3kgs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Nigel Gumley, DVM

HOSPITAL NAME

Cedarview Animal Hospital

REFERRING VET

Dr. Gumley

INVOICE

29052

DATE

2/16/23

PRESENTING CLINICAL SIGNS

History: Routine Holter 1 week ago revealed frequent VPCs. Had an echo with cardiologist 1 year ago and normal structure and function. Asymptomatic for heart disease. BP: 136, 132, 130mmHg. Abnormal PE/Chem/CBC/UA Results: CBC, chemistries, thyroid panel and NT. Cardiac arrhythmia on auscultation, lungs clear.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild to moderate left ventricular dilation in both systole and diastole with significantly decreased systolic function (LVIDdN 1.99, LVIDsN 1.47) Decreased LV wall thickness with increased sphericity. Mild left atrial enlargement. The mitral valve appears normal in form and function, with no obvious prolapse into the left atrial lumen. Mild central mitral regurgitation. No significant tricuspid regurgitation. Mild right atrial and ventricular dilation. The aortic valve is normal in morphology and mobility. No subvalvular ridge present; normal LVOT velocity. No aortic insufficiency. Normal pulmonic valve with trace pulmonic insufficiency seen. No pericardial or pleural effusion noted. No obvious cardiac tumors. A normal sinus rhythm with frequent isolated VPCs was noted during the study (single lead ECG attached).

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			NM	1.4	20	32	0.9
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	80	1.3	1.2	30.3	3.1	5.4	4.3
*Normal chamber parameters expressed as a mean value (SD)							
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							
Hansson et al, Vet Rad and Ultrasound 2002							
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995							
				5	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
				10	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
				15	1.50 (3.8)	3.27 (3.5)	2.06 (3.1)
				20	1.83 (2.0)	3.71 (2.4)	2.43 (2.1)
				25	2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
				30	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
				35	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
				40	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
				45	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)



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Unfortunately, this patient has changes most consistent with occult Dilated Cardiomyopathy (DCM). There is a decline in systolic function, accompanied by LV dilation and increased sphericity. The LA is only mildly dilated, indicating relatively low risk for imminent complication; however, risk for progression to clinical signs is elevated in the future. Going forward there will be risk for development of right or left sided congestive heart failure, malignant arrhythmias (AF, VT), collapse and/or sudden death.

Systolic failure can be primary in nature (DCM/ARVC) or secondary to taurine deficiency, certain drugs such as Doxorubicin, myocarditis, hypothyroidism, tachycardia-induced cardiomyopathy, or infiltrative disease such as lymphoma. In a 6yo Doberman primary disease is suspected. Consider contributing issues like an atypical diet or hypothyroidism. Regardless of cause, prognosis is guarded long term with risk for complications going forward. Patients with DCM and arrhythmias are at high risk for sudden death and this should be expressed to the owner. Mild activity restriction is advised.

Based upon these findings, recommend Pimobendan as below. Additionally, a baseline BP is recommended with institution of an ACEI if >150mmHg. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes in the future. Monitoring of sleeping breathing rates at home is recommended to screen for progression in the future. Mild activity restriction is advised. Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.

Treatment and follow up for the VPCs should be dictated by the holter report.

Anesthesia is not advised until the arrhythmia is further addressed.

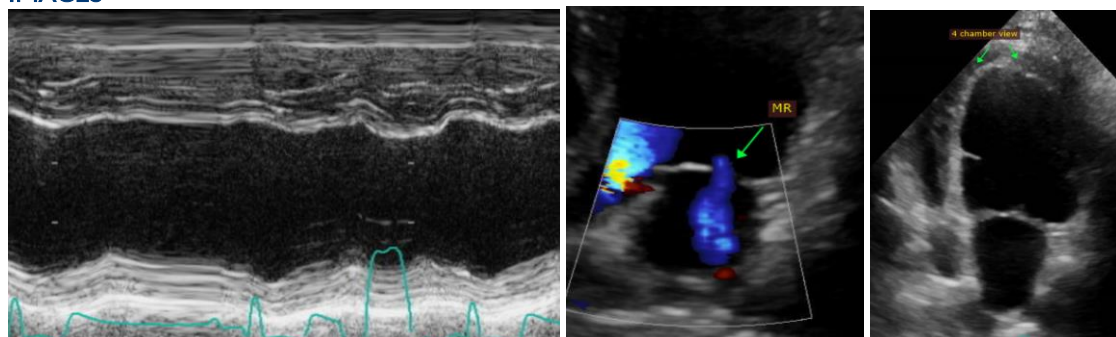
PLAN

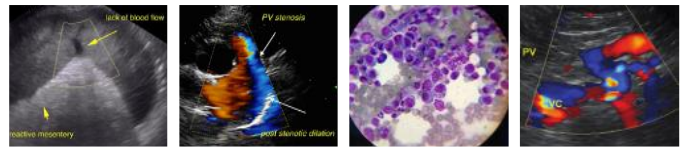
Institute Pimobendan 0.25-0.3mg/kg PO q12h. Baseline BP recommended. If >150mmHg, institute ACEI 0.5mg/kg PO q12h. Institute taurine supplement 1000mg PO q12h. Consider thyroid panel, diet history as discussed.

Treatment for the arrhythmia should be dictated by the holter report.

A recheck echocardiogram is recommended in 4-6 months to assess for progression, sooner if clinical signs arise.

IMAGES





PATIENT

Teakah Gotch-
Mitchell

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

Doberman

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

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