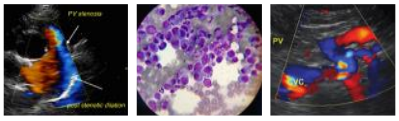
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

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PATIENT

Truman Minor

SPECIES

Canine

BREED

English Setter Mix

SEX

Male Neutered

AGE

1.31.18

WEIGHT

60.7lbs

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

HOSPITAL NAME

Parkville Animal Hospital

REFERRING VET

Dr. Slovon

INVOICE

26584

DATE

9.27.22

PRESENTING CLINICAL SIGNS

History: Presented for health exam, recently adopted. 4dx and confirmatory test: heartworm positive with microfilaria.
-Pertinent abnormal PE/Chem/CBC/UA Results: Heartworm +
-Current medications: Being treated with Drontal for Hookworms also.
-Sedation used: Not required to complete full diagnostic ultrasound.
-Pertinent previous ultrasound results: No previous.
-STAT: Not requested.
-Imaging performed by: Stephanie Warga RDCS, RVT.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild mitral valve thickening with no obvious prolapse into the left atrial lumen. Trace mitral regurgitation. Normal left atrial dimension. Normal LV diameter with adequate myocardial function. Normal LV wall thickness. The tricuspid valve appears normal in form and function. Trace TR. Normal velocity. Mild prominence of right atrium and ventricle; however, no significant enlargement appreciated. The pulmonic and aortic valves are normal in morphology and mobility. Normal LVOT and RVOT velocity. No aortic and mild pulmonic insufficiency. MPA appears normal; no obvious adult worms seen. The distal PA and branches are not extensively visualized. No pericardial or pleural effusion noted. No obvious cardiac tumors 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	NM	2.3	NM	1.3	30	58	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	100	1.6	1.2	27.5	3.2	3.7	2.6
*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)
				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

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overtly normal cardiac structure and function documented in this study with no obvious significant PAH. Trace TR is noted with a normal velocity, suggesting normal pulmonary pressures. There is no significant valvular regurgitation or chamber enlargement noted. The MPA appears normal, and there are no obvious adult worms seen. It is important to note that the distal branches are not well visualized on 2D imaging. Even with the best visualization, ultrasound is not 100% sensitive for finding adult worms, although suspicion is relatively low in a dog with no MPA dilation or symptoms.

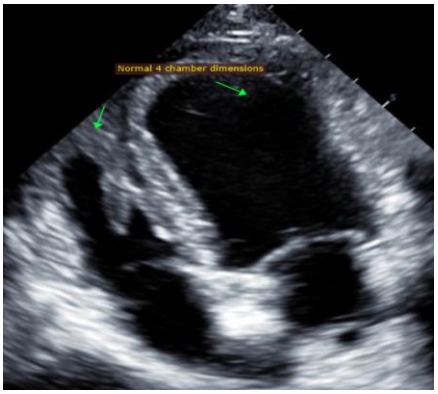
There is no obvious contraindication for Immiticide therapy with a presumably low adult worm burden based upon what is seen here. Confirming the diagnosis followed by the split immiticide protocol is recommended as dictated by the American Heartworm Society (www.heartwormsociety.org), including 30 days of doxycycline and monthly Ivermectin. Strict cage rest required at least until 4-6 weeks following the final treatment.

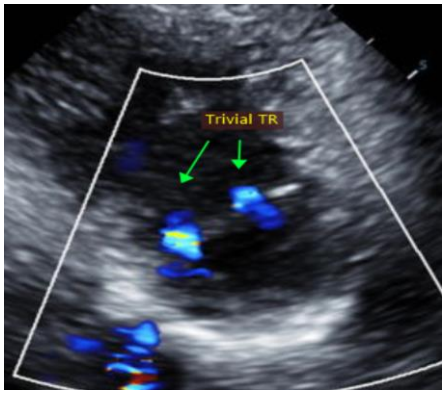
Any cough should be treated symptomatically utilizing anti-inflammatory steroids, hydrocodone, etc.

If treatment is successful, good chance for no long-term issues associated with HW disease (cough, pulmonary hypertension, pulmonary damage, etc.) given a normal cardiac structure and lack of clinical signs.

Follow up echocardiography is only necessary if clinical signs of cardiac disease develop (murmur, cough, fainting, etc.).

IMAGES





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.

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