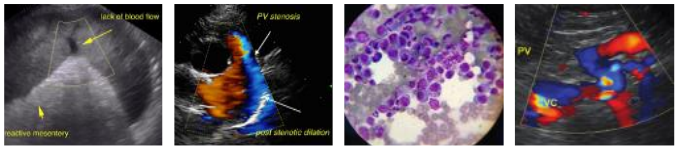
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Red Hovis

SPECIES
Canine

BREED
Beagle

SEX
Male Neutered

AGE
11 years

WEIGHT
53lbs

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

IMAGING PERFORMED BY
NP

HOSPITAL NAME
Franklin Animal Clinic

REFERRING VET
NP

INVOICE
26764

DATE
10/6/22

PRESENTING CLINICAL SIGNS

History: Chronic cough since 6/2022. Radiographs show moderate bronchointerstitial pattern. Serial monitoring or radiographs show at most mild worsening. Subjectively there may be some right heart enlargement. Treatment w/ Prednisone, Theophylline & Hycodan has had limited success that seems to vary week to week. Doxycycline and Baytril empirically have been tried. Sedated w/ Torbugesic and Acepromazine.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Normal mitral valve leaflets with no prolapse into the left atrial lumen. Trivial mitral regurgitation with no left atrial dilation. Decreased LV diameter with adequate myocardial function. Mild LV hypertrophy. The tricuspid valve appears normal with trivial tricuspid regurgitation. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No obvious aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

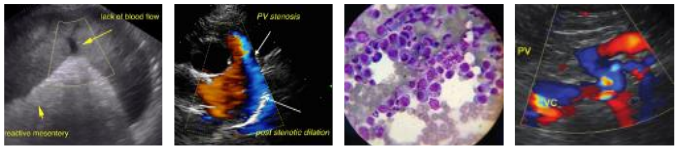
CARDIAC CHART

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	NA	NA	1.2	1.3	43	80	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	1.6	1.0	24.0	2.2	3.0	1.7
*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 dimensions and function, with no obvious dysfunction or dilation of the left heart. Mild LV hypertrophy is identified with a small internal chamber, which may reflect systemic hypertension and a baseline blood pressure is recommended. An alternative explanation would be volume depletion and baseline lab work should be assessed, if not recently performed. No significant valvular leaks are visualized, and no evidence of pulmonary hypertension.



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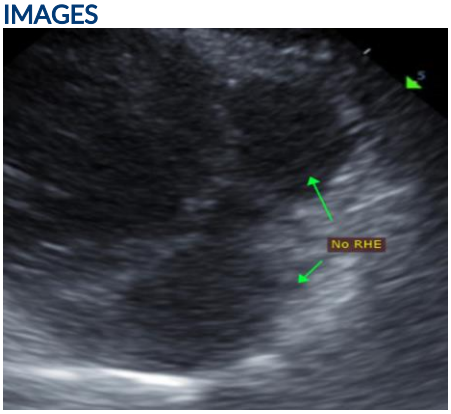
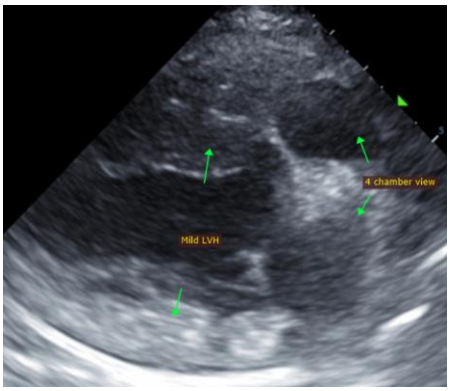
No cardiac medications are indicated at this time as the cough appears non-cardiac in origin. Continued work up for infectious/inflammatory respiratory causes is recommended. Options include Baytril or similar antibiotic, anti-inflammatory prednisone, aggressive hydrocodone, etc. If refractory, may consider TTW/BAL for further information. Even without obvious PAh this may develop in the future if respiratory disease is poorly controlled. Signs of PAH include exertional dyspnea or collapse.

Monitor for development of a heart murmur, cough, labored breathing, exercise intolerance or collapse episodes.

Chronic respiratory issues can lead to pulmonary hypertension if poorly controlled and a recheck echocardiogram is recommended should any exertional syncope/dyspnea occur, or a murmur be noted in the future.

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.

Maggie Machen Lamy, DVM
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