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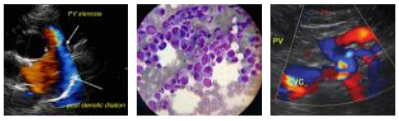

SonoPath
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PATIENT
Noah Baker

SPECIES
Canine

BREED
Jack Russell Terrier

SEX
Male Neutered

AGE
8.1.09

WEIGHT
15.5lbs

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

HOSPITAL NAME
Northwind Animal Hospital

REFERRING VET
Dr. Russ

INVOICE
26246

DATE
9.7.22

PRESENTING CLINICAL SIGNS

History: Grade 4/6 heart murmur. Weight loss.
-Pertinent abnormal PE/Chem/CBC/UA Results: Labs WNL.
-Radiographs: Globoid cardiomegaly. Right sided enlargement, mild to moderate mixed bronchial interstitial pattern.
-Current medications: None.
-Sedation used: Not required to complete full diagnostic ultrasound.
-Pertinent previous ultrasound results: No previous.
-STAT: Offered and declined by DVM.
-Imaging performed by: Stephanie Warga RDCS, RVT.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Severe diffuse thickening of mitral valve leaflets with prolapse into the left atrial lumen. Severe eccentric mitral regurgitation with severe left atrial dilation. PV appear dilated as they enter the LA lumen. Normal MR velocity. Moderate LV dilation with hyperdynamic myocardial function. The tricuspid valve appears thickened with septal prolapse and moderate tricuspid regurgitation. TR PG measured to be 80mmHg, consistent with severe PAH. Mild to moderate right atrial and ventricular dilation. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No obvious aortic insufficiency. Trace pulmonic insufficiency. Mild MPA enlargement. 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	5.0	4.4	NM	2.9	49	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	130	1.2	0.8	7.0	3.5	4.6	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				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

Chronic degenerative valve disease causing severe mitral and moderate tricuspid regurgitation. Severe left atrial enlargement indicates the risk for spontaneous congestive heart failure is elevated and cardiac supportive medications are indicated as below. In a dog without reported respiratory signs, diuretic use is controversial. Even without CHF noted on CXR, recommend institute low dose diuretic support including Lasix and spironolactone given high risk for decompensation in the future. Additionally, there is significant pulmonary hypertension present, with a PG of 80mmHg (normal <25mmHg). PAH in a patient with severe left heart disease is likely due to a combination of chronic LA pressure elevation and some degree of respiratory compromise, however no symptoms are reported. Given an essentially asymptomatic status, additional therapy with Sildenafil is not needed at this time however close monitoring for associated clinical signs is advised (exertional syncope/dyspnea, cough, etc.).

Long term prognosis is guarded to poor given the severity of disease and high risk for spontaneous CHF, development of arrhythmias and/or collapse at home. Monitoring of sleeping breathing rates at home is recommended to screen for early CHF in the future.

Close monitoring for development of associated clinical signs (development of a cough, labored breathing, exercise intolerance or worsening collapse episodes) is recommended. Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF at home.

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Elective anesthesia is not advised.

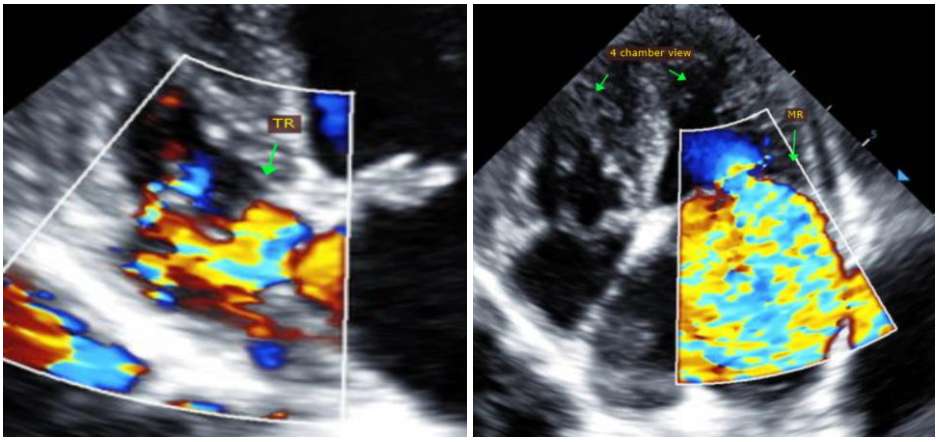
Elective anesthesia is not advised.

PLAN

Screening BP recommended. Institute Pimobendan 0.3mg/kg PO q12h. Institute ACE-I (benazepril or enalapril) 0.5mg/kg PO q12h. Institute spironolactone 1-2mg/kg PO q12h. Institute furosemide/Lasix 1 mg/kg PO q12h.

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

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
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com