



PATIENT

Scooter Mehaffey

SPECIES

Canine

BREED

Terrier Mix

SEX

Male Neutered

AGE

4 years

WEIGHT

55.4lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Potomac Mobile
Veterinary Ultrasound

HOSPITAL NAME

Hoof and Paw
Veterinary Hospital

REFERRING VET

Dr. Jarrett

INVOICE

25640

DATE

8/8/22

PRESENTING CLINICAL SIGNS

History: Grade 3/6 heart murmur. Enlarged right ventricle. Heartworm neg: 3/2022.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Elongated, thickened posterior TV leaflet with truncated tethered septal leaflet. No obvious stenosis. Distorted RV papillary musculature with apical displacement. Moderate to severe tricuspid regurgitation with moderate right atrial dilation. Tricuspid regurgitation velocity is mildly increased. LV diameter is normal with adequate myocardial function. LA is normal. Mitral valve is normal with no obvious regurgitation. Normal pulmonic and aortic outflow velocities. Pulmonic and aortic valves appear normal with no insufficiency. No pleural or pericardial effusion. No obvious cardiac tumors.

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	2.9	1.3	1.1	32	61	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	1.8	1.2	25.1	1.8	3.5	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)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>				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

The cause of the murmur is tricuspid valve dysplasia. This is causing moderate to severe tricuspid regurgitation and secondary RA dilation. This is an uncommon form of inherited heart disease aside from the Labrador retriever breed which is present from birth. As this dog ages, there will always be risk for progression to right-sided CHF and/or development of arrhythmias such as atrial fibrillation. No additional issues are identified.

Surgical reconstruction/repair is available as an option, though it requires use of cardiopulmonary bypass, and such procedures are only offered at select universities.

In this middle-aged dog, the finding of moderate RA right dilation is concerning although the remainder of the cardiac structure appears intact. It is important to note that little is known about



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Scooter Mehaffey

the long-term effects of medical therapy in patients with severe TVD prior to the onset of congestive failure signs. There may be theoretic benefit to use of Pimobendan in this case and consider institution at this time.

SPECIES

Canine

The long-term prognosis is guarded; however, outcome varies widely among TVD patients.

BREED

Terrier Mix

Anesthetic risk is considered moderately elevated if needed. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Mild IV fluid restriction is recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

SEX

Male Neutered

Monitor closely at home for development of any associated clinical signs, including abdominal distention, labored breathing, and/or collapse episodes or lethargy. Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Activity restriction is advised lifelong.

AGE

4 years

PLAN

Consider baseline chest radiographs and ECG. Consider institution of Pimobendan for theoretic benefit; 0.25-0.3mg/kg PO q12h.

WEIGHT

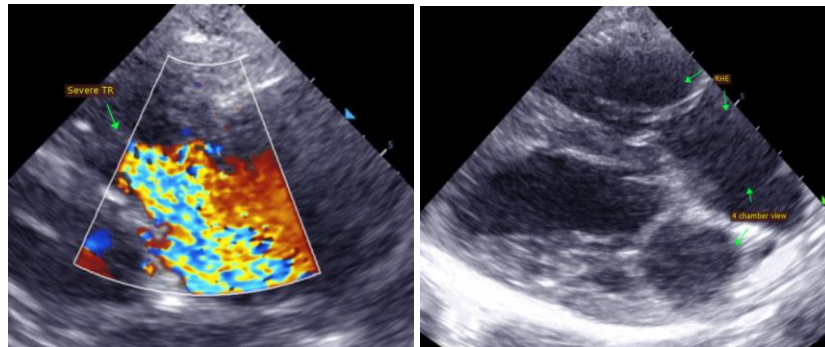
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A recheck echocardiogram is recommended in 6-12 months to screen for progressive dilation, sooner if any clinical signs arise.

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IMAGES



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Potomac Mobile
Veterinary Ultrasound

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.

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Veterinary Hospital

REFERRING VET

Dr. Jarrett

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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