



PATIENT

Waldo Bobson

SPECIES

Canine

BREED

Yorkie

SEX

Male Neutered

AGE

11 years

WEIGHT

15.4lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Dave Stasiuk,
RDMS, RDCS

HOSPITAL NAME

Resolution Veterinary
Ultrasound

REFERRING VET

Dr. K.D. Marahar

INVOICE

25363

DATE

7/15/22

PRESENTING CLINICAL SIGNS

History: Small volume pleural effusion seen on CXR. History of MR and TR. New louder murmur.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with mild prolapse into the left atrial lumen. Moderate anterior-directed mitral regurgitation with mild to moderate left atrial dilation. Mild LV dilation with mildly depressed myocardial function. The tricuspid valve appears mildly thickened with mild tricuspid regurgitation. Velocity consistent with mild PAH. Mild RA and RV enlargement. 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	NM	3.0	NM	1.6	25	42	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	0.9	0.5	7.0	1.6	3.1	2.3
*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)
Adapted from June Boon, Veterinary Echocardiography, 1998				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
Hansson et al, Vet Rad and Ultrasound 2002				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995				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)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing moderate mitral and mild tricuspid regurgitation. Mild 4 chamber enlargement is noted, which is unexpected given this degree of regurgitation. This also accompanies mild LV dysfunction, which is highly unusual in this breed. Finally, mild PAH is noted, which is of unknown significance in a dog without reported respiratory signs. No additional issues are identified.

Consider screening for causes of systolic dysfunction in this case, including a nontraditional diet or hypothyroidism. Regardless a taurine supplement is recommended on the off-chance of a malabsorption issue. Additionally given the combination of MV disease, mild dysfunction and mild pulmonary arterial hypertension I would institute Pimobendan in this patient as below.



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Monitoring for any clinical changes respiratory in origin is recommended. Prognosis is guarded given the combination of issues, and patient will always be at risk for progression to right or left-sided CHF, development of arrhythmias, collapse, etc going forward.

SPECIES

Canine

Even with disease seen here this does not clearly explain development of reported pleural effusion (not readily appreciated in this study). Right-sided CHF is unlikely prior to significant atrial dilation, and other possibilities should be considered. A radiologist review of the films is recommended if not already performed. Pending results advanced imaging such as a thoracic CT may be warranted.

BREED

Yorkie

Once on Pimobendan for 3-5 days, anesthetic risk is considered mildly elevated. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, iso or sevoflurane gas) are recommended. **Pre-oxygenate 5-10 minutes prior to induction.**

SEX

Male Neutered

Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Judicious IV fluid rates are recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

AGE

11 years

Omega fatty acid supplementation and mild salt restriction may also be of some long term benefit. Monitor for development of a progressive cough, labored breathing, exercise intolerance or collapse episodes.

WEIGHT

15.4lbs

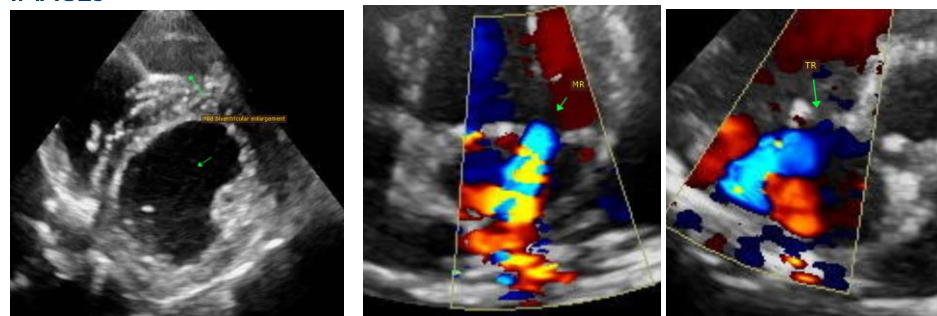
Plan: Baseline BP recommended. Institute heart muscle support Pimobendan 0.3mg/kg PO q12h. Institute Taurine 500mg PO q12h. Consider diet, thyroid status as discussed. Consider radiologist review of the films, etc.

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

Recommend monitor for progression with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

IMAGES



IMAGING PERFORMED BY

Dave Stasiuk,
RDMS, RDCS

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.

HOSPITAL NAME

Resolution Veterinary
Ultrasound

REFERRING VET

Dr. K.D. Marahar

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.

INVOICE

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