



PATIENT

Cazie Villarreal

SPECIES

Canine

BREED

Minature Sheltie

SEX

Female Spayed

AGE

12 years

WEIGHT

19lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Kara Wallisch,
DVM

HOSPITAL NAME

Sondel Family
Veterinary Clinic

REFERRING VET

Dr. Wallisch

INVOICE

21634

DATE

10/20/21

PRESENTING CLINICAL SIGNS

History: H/O CVD (prior echo results unavailable). 9-2021 exercise intolerance and coughing; instituted Pimobendan 2.5 BID. The owner elected to do SID due to cost. A week later, the owner stopped giving Pimo because it caused the dog to pace and pant at night and made her uncomfortable. Seen again in Sep 2021 for PUPD and "sneezing blood". Did CBC/Chem/UA- all unremarkable except possible UTI. Treated with antibiotic course. Per owner, went to ER sometime this month for blood from the nose, coughing fluid. Declined all diagnostics at the ER (chest x-ray, medication, etc.).

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only. Mild cardiomegaly. No obvious evidence of CHF.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets (anterior>posterior) with mild prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation with moderate left atrial dilation. Borderline LV with adequate myocardial function. The tricuspid valve appears normal, with no tricuspid regurgitation. Normal right atrial and ventricular diameter. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities. Mild aortic and trace pulmonic insufficiency. No pericardial or pleural effusion noted. No cardiac tumors observed.

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	NA	NM	1.67	47	90	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	0.98	0.5	8.6	2.5	3.4	1.8
*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)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing moderate mitral regurgitation. Moderate left atrial enlargement indicates there is relatively low risk for imminent complication, however risk for progression to spontaneous congestive heart failure in the future is elevated. A small aortic leak



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is noted, and a baseline blood pressure is strongly recommended. No additional issues are identified.

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Given the risk for progression and results of the EPIC trial, Pimobendan is indicated in this patient as below. If previously poorly tolerated, consider compounding without the flavoring as this is typically the issue (and often more cost effective). Twice daily dosing is certainly ideal as this was the frequency shown to prolong asymptomatic life. No obvious indication for additional medications at this time. Assessment of progression in the future will help predict long term outcome, however prognosis is guarded at this stage (B2).

BREED

Minature Sheltie

While mainstem bronchi compression may certainly be contributing to a chronic increase in coughing, other primary airway contributions should also be considered (tracheal collapse, COPD/chronic bronchitis, etc.). CHF is considered unlikely based upon moderate disease and the included chest radiographs. Consider hydrocodone for any mechanical component due to cardiomegaly. Screening chest radiographs are recommended.

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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.

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Once on the medication for 3-5 days, anesthetic risk is considered mildly elevated. Cardiac protective drug choices (opioid/benzodiazepine premedication, Propofol or alfaxalone induction, iso or sevo gas) are recommended. 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.

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

PLAN

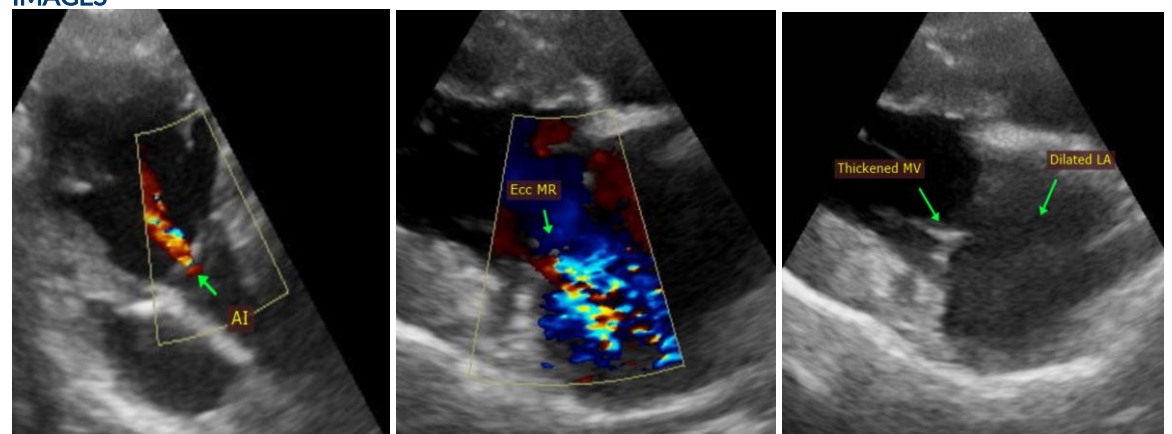
Institute heart muscle support Pimobendan 0.3mg/kg PO q12h (compound if needed for tolerance and/or improved cost). Baseline BP recommended. Consider hydrocodone as discussed.

IMAGING PERFORMED BY

Kara Wallisch,
DVM

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

IMAGES



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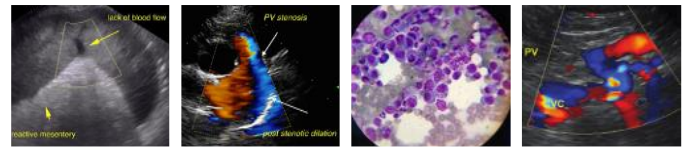
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The information and recommendations provided are based on the images presented by the referring



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veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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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