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Clinical Sonography & Telecytology
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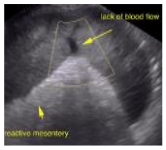
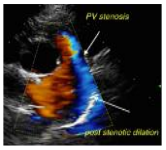
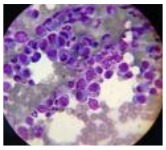
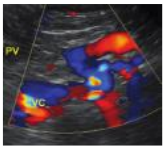

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1-800-838-4268 info@sonopath.com

PATIENT
Pete Fraylick

SPECIES
Canine

BREED
Silky Terrier

SEX
Male Neutered

AGE
13 years

WEIGHT
14.9lbs

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

IMAGING PERFORMED BY
A. Nicastro, DVM

HOSPITAL NAME
Veterinary Specialty Care Blue Pearl Mt Pleasant

REFERRING VET
Dr. Graham

INVOICE
29486

DATE
3/9/23

PRESENTING CLINICAL SIGNS

History: Began coughing/gagging "croup cough" at 8am, followed by collapse and 20-30s episode of shaking and copious urination. P was extremely lethargic for 1-2hrs after this episode, then drank water but refused food. Identical episode at 1215 and on 3/1. New murmur, grade 4/6. Tachypneic with mild effort and crackles.
-CXR report: Cardiomegaly with LAE. Mild PV distention.

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only.

Mild cardiomegaly with LA dilation. Caudodorsal alveolar pattern with equivocal PV dilation.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with mild prolapse into the left atrial lumen. Moderate anterior-directed mitral regurgitation with moderate left atrial dilation. Normal MR velocity. Minimal LV dilation with adequate myocardial function. The tricuspid valve appears mildly thickened with mild double jet of tricuspid regurgitation. Normal velocity. Normal right atrial and ventricular diameter and morphology. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No obvious aortic and trace pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

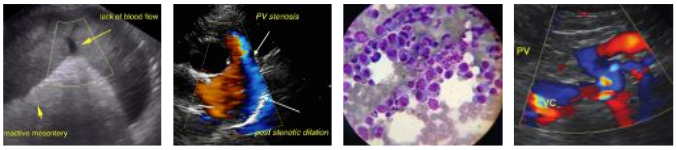
CARDIAC CHART

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	4.8	2.5	NM	1.7	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	1.0	0.7	6.74	2.4	3.0	1.6
*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

The cause of the murmur is chronic degenerative valve disease causing moderate mitral and mild tricuspid regurgitation. Moderate left atrial enlargement indicates relatively low risk for imminent



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complication, however there is an elevated risk for progression to spontaneous congestive heart failure going forward. No additional issues are identified such as PAH or systolic dysfunction.

While it is uncommon for moderate valve disease to lead to CHF, the CXR are equivocal and full cardiac support is recommended as below. If there is any question as to response to therapy (i.e., the crackles and/or respiratory effort persists), alternatives such as concurrent airway disease should be considered with repeat CXR. Monitoring of sleeping respiratory rates will be paramount to screen for recurrent congestive heart failure at home. Cough suppression to improve QOL can also be considered (hydrocodone, 0.2-0.4mg/kg up to q4-6h PRN) once diuretics are on board for any residual mechanical cough in the face of normal sleeping respiratory rates. The average survival time of canine patients with active pulmonary edema is 8-9 months on medications (stage C), however they generally are able to maintain a good quality of life for that period.

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for acute progression of the cough, labored breathing, exercise intolerance or collapse episodes in the future.

Elective anesthesia is not advised.

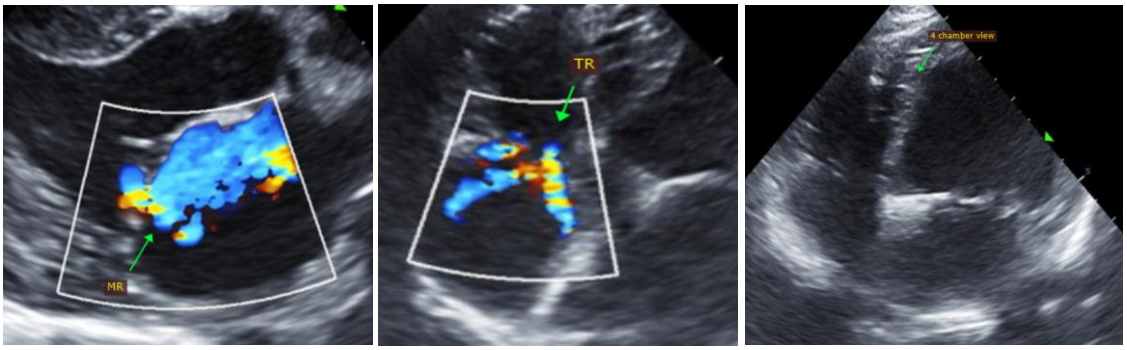
PLAN

Consider hospitalization for oxygen support if the patient appears unstable. Discharge on the following oral medications: Institute Lasix 1-2mg/kg PO q12h. Institute Pimobendan 0.3mg/kg PO q12h. Institute Spironolactone 1-2mg/kg PO q12h. Consider hydrocodone with homatropine 0.2-0.4mg/kg PO up to q4-6 hours PRN for cough. If the patient does not respond well to diuretic therapy, repeat chest films with consideration of alternative explanations such be considered.

Monitor renal values/BP in 10-14 days, then every 3-4 months while on diuretics. If doing and BP is >130mmHg, institute ACE-I 0.5mg/kg PO q12h.

Recheck: Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of associated clinical signs occurs in the interim.

IMAGES



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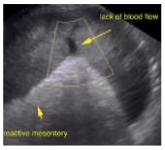

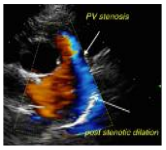

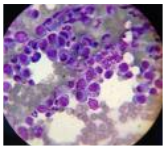
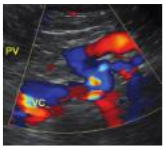

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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