



PATIENT

Little Dog Steensma

SPECIES

Canine

BREED

Pomeranian

SEX

Male Neutered

AGE

7 years

WEIGHT

15.25lbs

INTERPRETED BY

Maggie Machen
 Lamy, DVM, DACVIM
 (Cardiology)

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

Faithful Friends
 Animal Clinic

REFERRING VET

Dr. Rideout

INVOICE

21029

DATE

9/14/21

PRESENTING CLINICAL SIGNS

History: Has III/VI heart murmur, PMI mitral. Has had for several years. Has also had a chronic cough that responded to prednisone. Cough is more frequent, and prednisone wasn't helping, so had tapered him off prior to PE. Appetite is down. PE: 1# weight loss. Crackles right side. Tachypnea, no dyspnea.
 -Current medications: 10mg furosemide q12h.
 -Radiographic Findings: LA enlargement VHS score 14 Mild pulmonary edema.

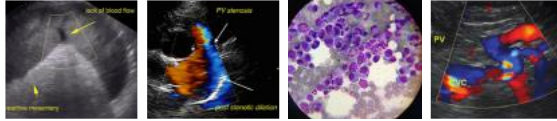
ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with prolapse into the left atrial lumen. Lack of coaptation in systole. Severe eccentric mitral regurgitation with severe left atrial dilation. Normal MR velocity. Significant LV dilation with hyperdynamic myocardial function. The tricuspid valve appears thickened with mild TR. Velocity consistent with moderate pulmonary hypertension. Mild right atrial and ventricular dilation. The pulmonic and aortic valves are normal in morphology and mobility. Normal aortic and pulmonic outflow velocities with laminar flow. No AI and mild PI. 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	5.2	4.0	2.4	2.5	53	85	0.39
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	178	1.2	0.6	6.9	2.6	3.8	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)
				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



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing severe mitral and mild tricuspid regurgitation. Severe left atrial enlargement indicates the risk for spontaneous congestive heart failure is high. Moderate pulmonary hypertension is noted, which is likely due to a combination of chronic LA pressure elevation, a chronic cough and active congestion. No additional issues are identified.

In light of the chest radiograph findings and severity of disease on echocardiogram, the diagnosis is congestive heart failure and medications are warranted lifelong as below. Monitoring of sleeping respiratory rates will be paramount to screen for congestive heart failure at home. Cough suppression to improve QOL in a dog with a chronic cough should also be considered (hydrocodone, 0.2-0.4mg/kg up to q4-6h PRN) for any residual mechanical cough in the face of normal sleeping respiratory rates. Avoid steroids in the future in this patient going forward. The average survival time of canine patients with active pulmonary edema is 8-9 months on medications, however they generally are able to maintain a good quality of life for that period. Patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.

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.

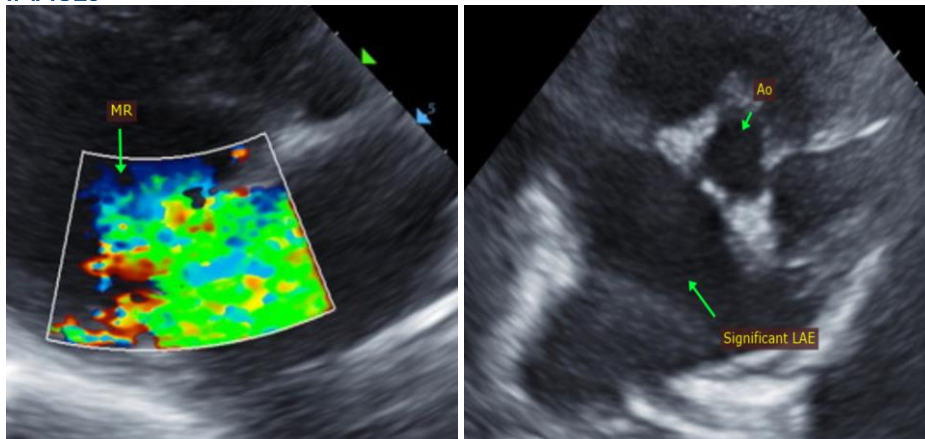
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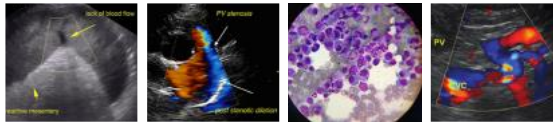
Institute Pimobendan 0.3mg/kg PO q12h. Institute Furosemide 1-2mg/kg PO q8h for 3-5 days if patient is doing well at that time decrease to q12h. Institute ACE-I 0.5mg/kg PO q12h. Institute spironolactone 1-2mg/kg PO q12h.

Monitor SRRs at home. Monitor renal values in 10-14 days, then every 3-4 months while on diuretics. Consider hydrocodone if needed for QOL.

Recommend conservative monitoring with a recheck echocardiogram in 4-6 months, sooner if any development of associated clinical signs occurs in the interim.

IMAGES





PATIENT

Little Dog Steensma

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.

SPECIES

Canine

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.

BREED

Pomeranian

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com

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