



PATIENT

Kaden Jillson

SPECIES

Canine

BREED

Yorkshire Terrier

SEX

Male Neutered

AGE

15 years

WEIGHT

11.2lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Karen Ebersole,
DVM, DABVP

HOSPITAL NAME

Scanvet

REFERRING VET

Dr. Houston

INVOICE

29671

DATE

3/17/23

PRESENTING CLINICAL SIGNS

History: Multiple episodes of collapse this am. Recently developed a cough and has a history of chronic diarrhea. Gave Lasix IM and Butorphanol IM after quick echo. Grade 4/6 systolic heart murmur, increased RR, frantic when stressed.

-Radiographs: Cardiomegaly, possible pulmonary edema.

*Difficult patient to medicate.

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only. Significant biventricular cardiomegaly. Concern for CHF.

ECHOCARDIOGRAM FINDINGS

2D, m-mode and Doppler imaging are available. Diffuse thickening of mitral valve leaflets (anterior > posterior) with prolapse into the left atrial lumen. Severe eccentric mitral regurgitation with severe left atrial dilation. Severe LV dilation with hyperdynamic myocardial function. The tricuspid valve appears thickened with septal prolapse and mild to moderate tricuspid regurgitation. Mild right heart enlargement. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities. No pulmonic or aortic 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	5.1	NM	2.0	2.9	51 83		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	1.2	0.9	5.1	3.0	3.8	2.0
*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)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is chronic degenerative valve disease causing severe mitral and mild to moderate tricuspid regurgitation. Severe left atrial enlargement indicates the risk for spontaneous congestive heart failure is elevated. Mild TR is also noted, with suspicion of early pulmonary hypertension. No additional issues such as systolic dysfunction are identified.



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The described cough is likely multi-factorial in origin, including a mechanical component due to cardiomegaly, possible concurrent airway disease and/or early CHF given the severity of disease. Given the chest radiograph findings, acute onset syncope and severity of disease seen here, the diagnosis is CHF and full cardiac support is suggested as below. Consider hospitalization if indicated for an unstable patient. Depending on clinical response to the medications, cough suppression may also be useful. Monitoring of sleeping breathing rates in the future will be paramount to determine the origin of any future cough. The average survival 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. Monitoring of renal values is recommended lifelong.

The history mentions that the patient is difficult to medicate and 4 medications may be daunting. If that is case, consider liquid oral Lasix as the most life-saving medication (available commercially; 10mg/ml). Pimobendan can be compounded into a liquid as well if necessary; however, the transdermal is not recommended. The remaining medications can either be compounded into a liquid formulation, or simply not used. These are not considered life-saving, rather have long term survival benefit. Discussion with the owner is advised.

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

PLAN

Screening BP is recommended. Consider hospitalization as discussed for stabilization. Oral medications: Institute Lasix 1-2 mg/kg PO q12h (consider liquid formulation if indicated). Consider compound Pimobendan into a liquid as well 0.3mg/kg PO q12h. Either compound or forego Spironolactone 1-2mg/kg PO q12h.

A renal panel and BP are recommended in 10-14 days, then every 3-4 months on diuretics to ensure tolerance of medications. If BP >130mmHg and doing well at home, consider ACEI 0.5mg/kg PO q12h (or forego as discussed).

A recheck echocardiogram is recommended in 6 months to screen for progression, sooner if clinical signs arise/persist.



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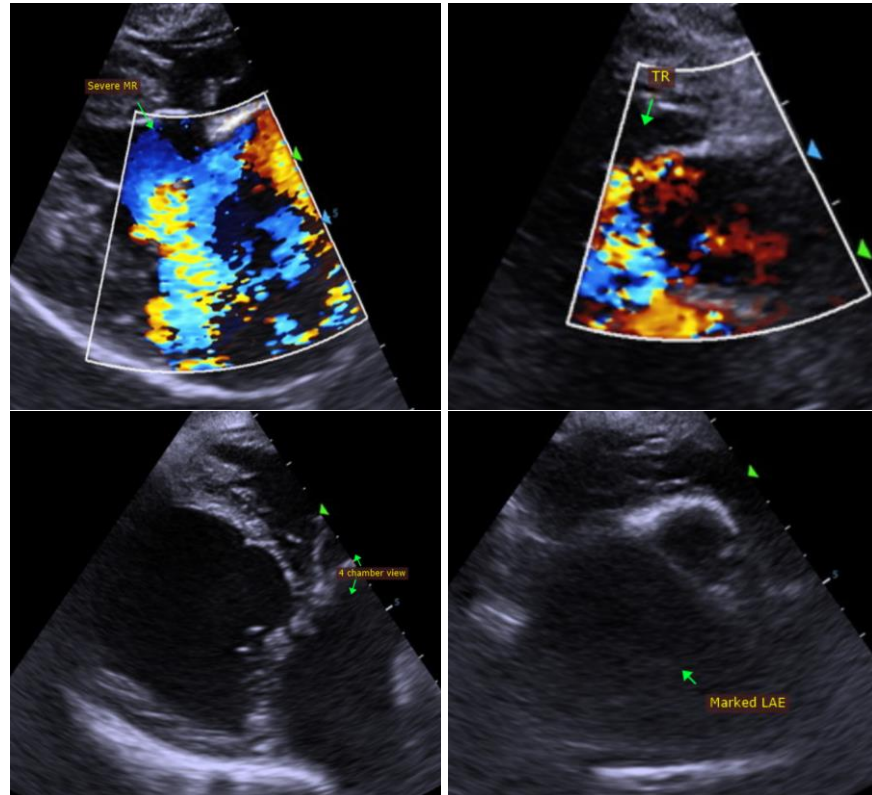
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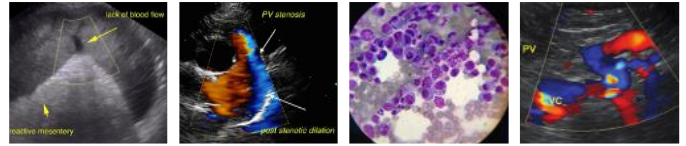
IMAGES



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



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