



PATIENT

Spot Foster

SPECIES

Canine

BREED

Cavalier

SEX

Male Neutered

AGE

13 years

WEIGHT

23lbs

PRESENTING CLINICAL SIGNS

History: Recheck echo. Presented to Emergency Clinic on 3/10/22 for a tense and painful abdomen after eating mulch. Radiographs showed suspicious area in cranial abdomen and worsening heart disease. PE: heart murmur Grade 5/6 (palpable thrill today). FNA of thoracic/heart base mass done. Coag panel normal, Propofol for FNA. Cytology showed aortic body carcinoma.
 -Current medications: Lasix 20mg BID, Pimobendan 2.5mg BID, Enalapril 5mg BID.
 -Pertinent previous echo findings (7/2021 MML): Showed severe MR and moderate TR; severely enlarged LA, and early PH. Also, atypical hyperechoic tissue noted distal to the great vessels.
 -Radiographs: Severe cardiomegaly, questionable soft tissue density cranial abdomen.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The mitral valve is diffusely thickened with significant prolapse into the left atrial lumen. There is severe eccentric mitral regurgitation present. There is severe left atrial enlargement. There is mild left ventricular dilation. Left ventricular systolic function is hyperdynamic. There is normal systolic flow velocity across the aortic valve. The aortic valve appears trileaflet with normal mobility. The main pulmonary artery is normal in diameter, with evidence of compression. The pulmonic valve is normal in appearance. Mild right heart enlargement (subjective). Mild thickening of the tricuspid valve with moderate tricuspid regurgitation. Velocity consistent with moderate pulmonary hypertension. Elevated flow velocity through the MPA. Mild pulmonic insufficiency. No obvious pericardial effusion seen. Scant pleural effusion suspected. Large well demarcated tumor associated with the heart base.

CARDIAC CHART

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Dr. Karen Ebersole

HOSPITAL NAME

Scanvet

REFERRING VET

Dr. Sheridan

INVOICE

23224

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3/22/22

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	2.5	2.4	50	84	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	1.4	2.0	10.4	3.3	4.0	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)

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 moderate tricuspid regurgitation persists with evidence of progression. Severe LA dilation is noted as well as moderate progressive pulmonary hypertension. This is likely, at least in part, due to compression by a large heart base tumor. The velocity through the MPA is mildly elevated and compression is suspected based upon the totality of the findings.

A chemodectoma is diagnosed both by appearance/location of the mass and FNA results. Chemodectomas are often incidental findings, only causing clinical signs if blood flow is obstructed, pericardial effusion occurs, or a metastatic lesion causing systemic issues. The prognosis with cardiac chemodectomas is fair, with an MST of 1-2 years; however, outcome in this case is likely limited by CVD/CHF with a more guarded prognosis of <6mo. The limiting factor with cardiac neoplasia is often hemorrhage into the pericardium. Other sequelae include impingement of cardiac blood flow secondary to tumor growth, or metastasis to the thorax or abdomen. At this time early compression is seen with suspicion for early pleural effusion. Consider full systemic screening for evidence of metastasis (AUS, etc.) in addition to referral for advanced imaging such as thoracic CT scan to further investigate the lesion. It is important to note that the tumor is INDEPENDENT of left heart disease; rather, this would lead to right-sided cardiomegaly and development of effusions (as compared to recent pulmonary edema).

Even before the tumor was seen on the prior study, the patient was already in CHF which carries a poor prognosis. Given that the patient has been in CHF for nearly a year and now a large space occupying mass is seen, **the prognosis in this case is grave.** Our goal is stabilizing the situation for the short-term; however, medications are a band-aid over a much bigger problem. Consider consultation with an Oncologist as chemotherapy or radiation may slow tumor growth; however, medical management would be a reasonable option as well. If the patient's quality of life suffers in the short-term, euthanasia should be elected.

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes. Serial monitoring of SRRs is recommended as the best way to screen for progression towards CHF at home.

PLAN

Screening BP recommended. Continue Lasix, Pimobendan and ACE-I as prescribed. Institute Spironolactone 1-2mg/kg PO q12h. Consider Hydrocodone if needed for quality of life. Consider referral, full systemic evaluation, etc. as discussed. Euthanasia should be elected if quality of life suffers.

Monitor renal values and BP every 3-4 months life-long.

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



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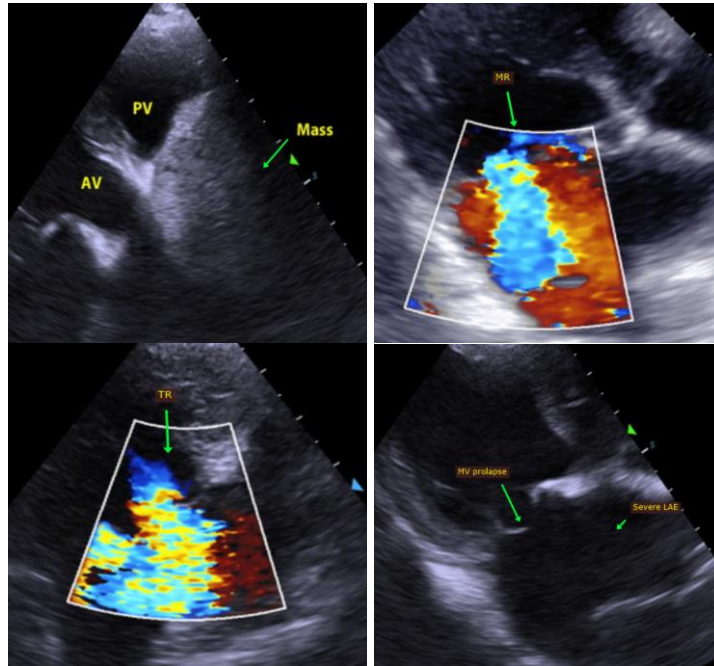
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IMAGES



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.

INTERPRETED BY

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