



PATIENT

Gizmo Read

PRESENTING CLINICAL SIGNS

History: Long history of murmur. Presented to ER 8/12/pm in respiratory distress. H/O CHF and has been managed on the following: Pimobendan 1.25mg BID, Lasix 6.25mg BID, 2.5mg Benazepril BID. Hospitalized for 24 hours on furosemide CRI and O2. Responded well.

SPECIES

Canine

BREED

Shih Tzu

SEX

Male Neutered

AGE

10 years

WEIGHT

10.8lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Rachel Runnels, RVT

HOSPITAL NAME

SVS Imaging KC

REFERRING VET

Dr. Mervin

INVOICE

25779

DATE

8/15/22

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The mitral valve is markedly thickened with significant prolapse into the left atrial lumen. There is severe eccentric mitral regurgitation present. The MR velocity is normal. There is marked left atrial enlargement. There is mild left ventricular dilation. Left ventricular systolic function is hyperdynamic. Mild right atrial Rex C8 severe CHF and ventricular dilation (subjective). Mild thickening of the tricuspid valve with moderate TR. Velocity consistent with moderate PAH. 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. The pulmonic valve is normal in appearance. No pericardial/pleural effusion or cardiac masses are seen.

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	5.8	3.7	2.6	2.6	49	82	0.14
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	130	1.1	0.82	4.9	3.0	3.3	1.7
*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 moderate tricuspid regurgitation. Marked left atrial enlargement indicates the risk for spontaneous congestive heart failure is elevated. Moderate pulmonary hypertension is noted, which is likely secondary to chronic LA pressure elevation and potentially concurrent airway disease given the breed. No additional issues are identified.

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In light of the prior clinical signs, reported chest radiograph findings and severity of disease on echocardiogram, the diagnosis of congestive heart failure is supported and continued medications are warranted lifelong as below. It is unclear if the Lasix dose was adjusted following decompensation; if not, an increase is advised. Monitoring of sleeping respiratory rates will be paramount to screen for 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) for any residual mechanical cough in the face of normal sleeping respiratory rates.

SPECIES

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BREED

Shih Tzu

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. It is worth noting that this patient is considered end stage with refractory CHF, and our goal is to maintain a good QOL for a matter of months.

SEX

Male Neutered

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.

AGE

10 years

Plan: Administer Pimobendan 0.3mg/kg PO q12h. DOSE INC: Administer Furosemide 12.5mg PO q12h. Institute spironolactone 1-2mg/kg PO q12h. Pending BP >130mmHg, continue ACEI ACEI 0.5mg/kg PO q12h.

WEIGHT

10.8lbs

Monitor SRRs at home. Monitor renal values and BP in 10-14 days, then every 3-4 months while on diuretics. If doing well and BP >130mmHg, institute Consider hydrocodone if needed for QOL.

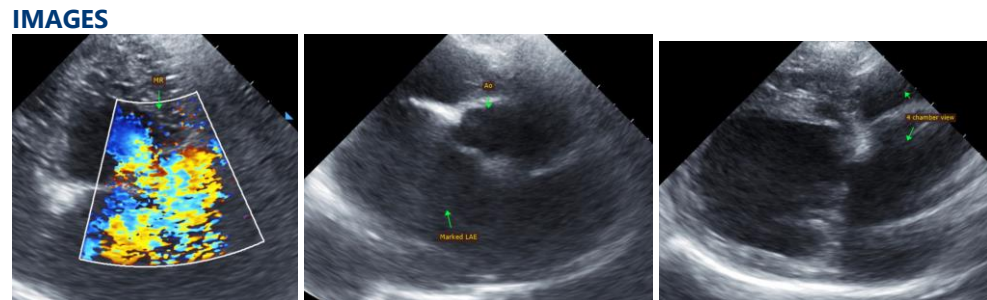
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(Cardiology)

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

IMAGING PERFORMED BY

Rachel Runnels, RVT



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.

HOSPITAL NAME

SVS Imaging KC

REFERRING VET

Dr. Mervin

Thank you for this referral. 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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