

PATIENT

Cupcake Kunkel

PRESENTING CLINICAL SIGNS

History: Recheck echo.

-Pertinent abnormal PE/Chem/CBC/UA Results: SDMA: 29, largely NSF.

Current medications: HG/NG, Pimobendan 2.5mg q12h, Ursodiol 50mg q12h., Pepcid Ac q12h.

SPECIES

Canine

-Sedation used: Sedation not required for scan.

-Pertinent previous ultrasound results: (2/2018 MML): Initially significant LVH/RVH, improved on Atenolol and Pimobendan at follow up exam (5/2018). Syncope also improved with medications.

-STAT: Not requested

BREED

Shih Tzu

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with no obvious prolapse into the left atrial lumen. No obvious mitral regurgitation with normal left atrial dimension. Small LV diameter with adequate myocardial function. The LV is significantly hypertrophied (1.0-1.3cm), with a mildly heterogenous appearance. The RV wall also appears affected, although to a lesser extent. The tricuspid valve appears normal with no tricuspid regurgitation. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. Mildly elevated pulmonic and aortic outflow velocities with laminar flow. No obvious aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

SEX

Female Spayed

AGE

15 years

CARDIAC CHART

WEIGHT

12lbs

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	NA	NA	NM	1.2	58	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	130	1.2	0.95	5.4	1.4	1.5	0.6
*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)
<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

INTERPRETED BY

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 (Cardiology)

HOSPITAL NAME

Veterinary Housecall
 Services

REFERRING VET

Dr. Golden

INVOICE

20522

DATE

8/12/21

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The unusual nature of this case persists. Today's study is most similar to the initial exam in February of 2018. The LV hypertrophy is marked, and the RV appears affected as well. The LV appearance did appear improved on the follow up study (5/2018) which is difficult to explain in hindsight. Regardless, these findings would suggest persistent or potentially progressive myocardial disease although the exact etiology remains unknown. Infiltrative disease remains a possibility; however, it is difficult to explain that the patient has done well for the past 3 years should that be the case. A baseline blood pressure is recommended, in addition to further diagnostics that were initially recommended if not recently performed (full systemic evaluation, cardiac troponin level, etc.). Prognosis remains guarded; however, the patient is reportedly doing well which is certainly a good sign.

Given what is seen here, continue Pimobendan going forward. Given that Atenolol was discontinued, one low risk option would be to reinstitute it as this was the only variable that has changed. Discussion with the owner is advised. No further medications are warranted prior to blood pressure evaluation.

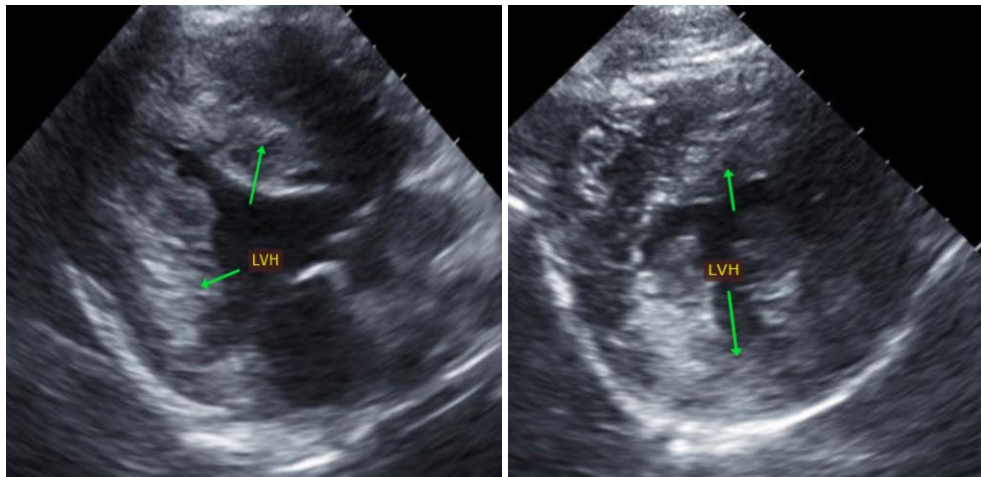
Monitor for development of a murmur, cough, labored breathing, exercise intolerance or progressive collapse episodes.

PLAN

Consider further systemic evaluation as was previously recommended. Continue Pimobendan lifelong. Consider reinstitute atenolol as previously prescribed. No additional medications are indicated in the absence of systemic hypertension or clinical signs. Consider referral given the highly unusual nature of this case.

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

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

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