



PATIENT

Angel Putze

SPECIES

Canine

BREED

Shih Tzu

SEX

Female Spayed

AGE

14 years

WEIGHT

17.8lbs

INTERPRETED BY

Maggie Machen
Lamy, DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Fred Gromalak, DVM

HOSPITAL NAME

SVS Imaging

REFERRING VET

Dr. Sherrod

INVOICE

22247

DATE

12/2/21

PRESENTING CLINICAL SIGNS

History: Recheck echo. Struggling to walk, falling down periodically. Cries out then collapses. PD.

-Current medications: Sildenafil 20mg TID & pimobendan 2.5mg BID.

-CBC: WNL. CHEM: ALKP increased at 1743.

-Pertinent previous echo findings (5/2021 MML): Normal LA, small LV, no TR, mild to moderate RAE, mild RVH, PAH, mild MPA dilation.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with mild prolapse into the left atrial lumen. No obvious mitral regurgitation with a normal left atrial dimension. Decreased LV diameter with adequate myocardial function. LV wall dimension is mildly increased. The tricuspid valve appears significantly thickened with septal prolapse and moderate to severe tricuspid regurgitation. Velocity consistent with moderate pulmonary hypertension. Moderate right atrial enlargement; mild right ventricular hypertrophy with mild dilation consistent with pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. Moderate main PA and branch dilation. Trace pulmonic 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	NA	4.0	1.5	1.3	44	79	0.4
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	NM	8.1	1.5	1.5	0.8
*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)
<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

Pulmonary hypertension (PAH) persists with evidence of mild progression. No TR was noted on the prior study, making quantification difficult; however, at least moderate pressure elevation was suspected. This is confirmed here with a pressure gradient of 64mmHg (normal is <25mmHg; severe >80mmHg). The right heart is increased in size compared to the prior study; however, the findings appear consistent with moderate pressure elevation. No additional issues are identified.



PATIENT

Angel Putze

SPECIES

Canine

BREED

Shih Tzu

SEX

Female Spayed

AGE

14 years

WEIGHT

17.8lbs

INTERPRETED BY

Maggie Machen
Lamy, DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Fred Gromalak, DVM

HOSPITAL NAME

SVS Imaging

REFERRING VET

Dr. Sherrod

INVOICE

22247

DATE

12/2/21

Clinical signs of weakness, heavy breathing, cyanosis, and syncope are attributed to severe PAH. While struggling to walk and falling down may certainly be related, symptoms of PAH typically only occur with exertion. Further historical information is necessary. Additionally, an acute increase (if present) is difficult to explain in the absence of concurrent respiratory signs. Possible considerations should include PTE formation, blood pressure swings, etc. **A baseline ECG, blood pressure and chest radiographs are recommended as the next step.** The patient is already on high dosages of both Pimobendan and Sildenafil making simple medication adjustments difficult. If no obvious acute exacerbant is identified pending further evaluation, consider a course of Baytril and/or anti-inflammatory course of steroids as potential empiric therapy. It is worth noting that a completely separate issue may be causing the symptoms as well in this senior dog, and full systemic evaluation should be considered including abdominal ultrasound.

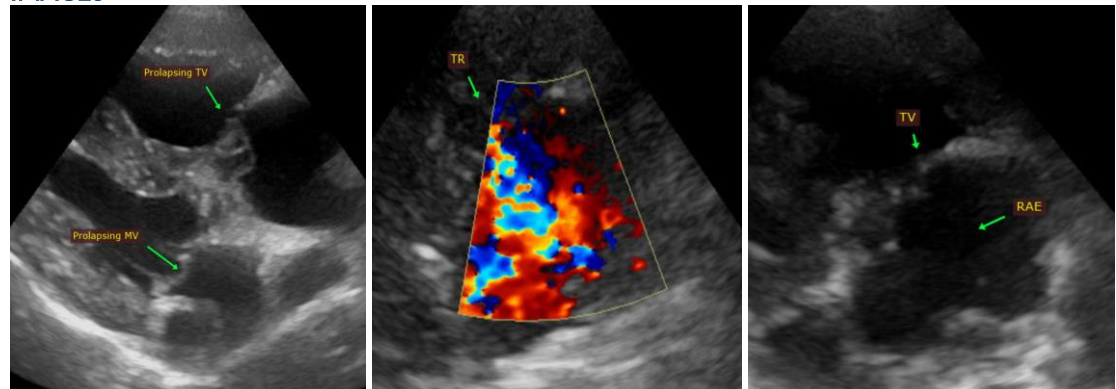
Omega fatty acid supplementation (anti-inflammatory) may be of some long-term benefit. Monitor for worsening of labored breathing, exercise intolerance or collapse episodes.

PLAN

Continue Pimobendan and Sildenafil as prescribed. Baseline BP, CXR and ECG are recommended as discussed. Consider full systemic evaluation. If no obvious issues are identified, consider a course of Baytril or similar antibiotic +/- anti-inflammatory taper course of steroids.

Recommend recheck echocardiogram pending clinical progression or in 6 mo. If the patient continues to deteriorate, referral to a multispecialty center is highly recommended.

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