



PATIENT

Lola Alsina

SPECIES

Canine

BREED

Chihuahua

SEX

Female

AGE

14 years

WEIGHT

5.1lbs

PRESENTING CLINICAL SIGNS

History: Lola presented for a 2nd opinion for evaluation of historical CHF and having recurrent syncope episodes. Previously no history of echo only an EKG and cardiac medications were instituted. Pot belly abdomen and abdominal effort during respiration. Grade 5/6 heart murmur with thrill. -Current medications: (benazepril 5mg /furosemide 20mg /pimobendan 2.5mg solution all in one) + spironolactone 25mg 1/4 tab. -Abnormal PE/Chem/CBC/UA Results: CBC - leukocytosis chem - increased BUN. -Radiographs: Severe cardiomegaly with globoid heart. Broncho interstitial pattern. Abdomen seems unremarkable General appear: QAR SENILE Ear: deaf Oral-Teeth: tongue is always hanging out of mouth and its dry respiratory: abdominal breathing and had a syncope during radiographs Neurological: senile Musculoskeletal: abdominal muscle atrophy.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The mitral valve is thickened with mild prolapse into the left atrial lumen. There is severe eccentric mitral regurgitation present. There is severe left atrial enlargement. The left ventricular is not significantly dilated. Left ventricular systolic function appears adequate. There is normal systolic flow velocity across the aortic valve. The aortic valve appears trileaflet with normal mobility. No AI. The main pulmonary artery is dilated. Mild to moderate right atrial and right ventricular dilation. RV hypertrophy. The tricuspid valve is moderately thickened with moderate tricuspid regurgitation. Velocity consistent with severe pulmonary hypertension. No aortic and trace pulmonic insufficiency. No pericardial/pleural effusion or cardiac masses are seen.

CARDIAC CHART

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

G. Ferrer, DVM

HOSPITAL NAME

Paseos Veterinary
Center

REFERRING VET

Dr. Ortiz

INVOICE

23341

DATE

3/29/22

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	5.0	5.2	NM	2.2	59	90	0.17
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	150	0.8	0.9	2.3	1.75	2.1	8.5
*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


PATIENT

Lola Alsina

SPECIES

Canine

BREED

Chihuahua

SEX

Female

AGE

14 years

WEIGHT

5.1lbs

INTERPRETED BY

 Maggie Machen Lamy,
 DVM, DACVIM
 (Cardiology)

IMAGING PERFORMED BY

G. Ferrer, DVM

HOSPITAL NAME

 Paseos Veterinary
 Center

REFERRING VET

Dr. Ortiz

INVOICE

23341

DATE

3/29/22

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing severe mitral and moderate tricuspid regurgitation. Severe left atrial enlargement indicates the risk for spontaneous left-sided congestive heart failure is elevated. There is also concurrent severe pulmonary hypertension and right heart enlargement, which may indicate underlying pulmonary pathology as well. No additional issues are noted.

Syncope in this patient is certainly cardiogenic in origin and are most consistent with severe pulmonary hypertension in addition to poor forward cardiac output. PAH can cause exertional dyspnea/collapse and exercise intolerance. PAH typically develops secondary to chronic elevated LA pressure or secondary to airway disease. The TR velocity and RV/MPA changes support a chronic severe pulmonary hypertension with a gradient >100mmHg (normal <30mmHg). This degree of PAH can also lead to hepatic congestion, and if poorly controlled can ultimately result in right-sided CHF. Early CHF can also lead to syncope, and if ascites or edema are noted, the diuretic should also be increased. If syncope persists despite these changes, other causes should be considered such as an arrhythmia not captured on the ECG, etc.

A combination solution is being utilized which makes dose titration/evaluation extremely difficult. If this is the only way the patient can be medicated, consider a separate solution of diuretic, as this dose will need to be changed going forward (Pimobendan and ACE-I rarely need to change).

Pending response, cough suppression (up to q4-6 hours) may also be helpful for QOL if needed. Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF at home. The degree of PAH is concerning for pulmonary changes as well and repeat radiographs once stable on medications may be useful for future comparison.

The average survival of canine patients with this severity of disease and diagnosis of CHF is 8-9 months on medications, however they generally are able to maintain a good quality of life. Going forward the risk will remain high for CHF, development of arrhythmias/syncope and sudden death, and close monitoring 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

Continue Spironolactone as prescribed. Administer Furosemide 1-2mg/kg PO q12h. Administer Benazepril 0.5mg/kg PO q12h. Administer Pimobendan 0.3mg/kg PO q12h. Initiate sildenafil 1-2mg/kg PO q8h. Consider separating Lasix from other medications as dose changes are frequently required.

A renal panel/BP is recommended in 10-14 days to ensure tolerance of medications, then every 3-4 months lifelong.

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



PATIENT

Lola Alsina

SPECIES

Canine

BREED

Chihuahua

SEX

Female

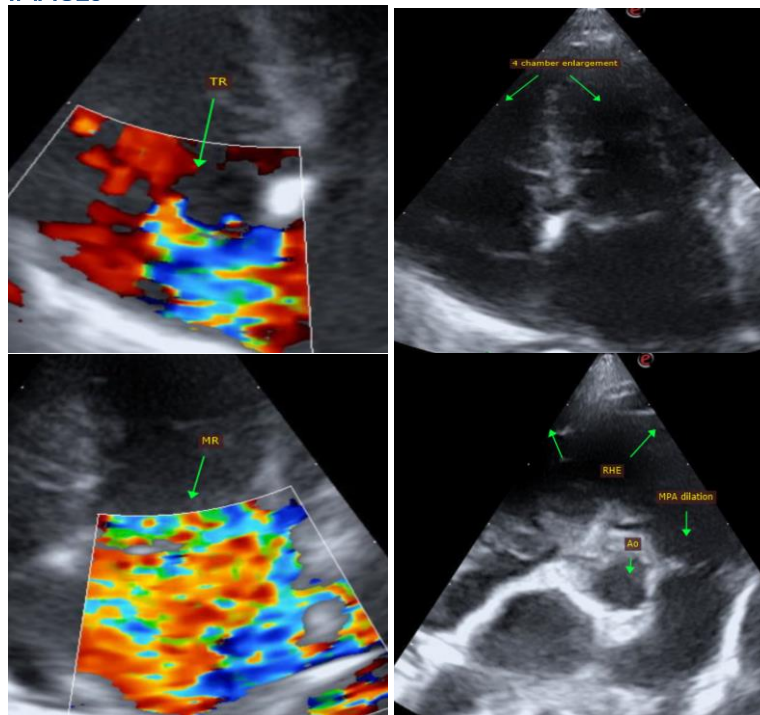
AGE

14 years

WEIGHT

5.1lbs

IMAGES



INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

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.

IMAGING PERFORMED BY

G. Ferrer, DVM

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

HOSPITAL NAME

Paseos Veterinary
Center

REFERRING VET

Dr. Ortiz

INVOICE

23341

DATE

3/29/22