



PATIENT

Rocko Bandbaz

SPECIES

Canine

BREED

Chihuahua

SEX

Male Neutered

AGE

13 years

WEIGHT

8.3lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Loetitia St-Jacques,
LVT/RVT

HOSPITAL NAME

Roundhill Animal
Hospital

REFERRING VET

Dr. Kelly

INVOICE

24638

DATE

6/7/22

PRESENTING CLINICAL SIGNS

History: Recheck echo. Recent ascites with 2 separate fluid removals. The cough and wheezing has improved since starting digoxin and diltiazem.

-Current medications Cerenia 24mg, 1/2 of a tablet once daily 5 days a week Vetmedin 3.75mg: 1/3 of a tablet every 8 hours Enalapril 2.5mg: 1 tablet bid Sildenafil 20 mg/ml: 0.5 cc bid Furosemide 5% injections: used alternatively depending on necessity with oral, 0.3cc Tid Furosemide 1% oral: 1.5cc po bid Digoxin: 0.06mg/ml: 0.4cc po bid Diltiazem, 10mg tid Hydrocodone 1mg/ml, as needed for cough. Spironolactone 25mg, 1/4 of a tablet sid -Discontinued theophylline.

ELECTROCARDIOGRAPHIC FINDINGS

A six lead ECG is available at 50mm/s; 10mm/mV. The average heart rate is 200bpm (range 150-250bpm). The rhythm is irregularly irregular with no identifiable P waves. No ventricular arrhythmias observed.

ECG diagnosis: Atrial fibrillation.

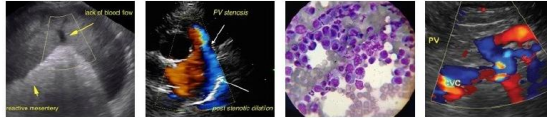
ECHOCARDIOGRAM FINDINGS

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. The MR velocity is normal. There is marked left atrial enlargement. There is mild left ventricular dilation. Left ventricular systolic function is hyperdynamic. Moderate right heart enlargement. Significant thickening of the tricuspid valve with septal prolapse and 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	5.1	3.9	NM	2.9	62	92	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	200	1.2	0.54	3.78	4.0	3.3	1.2
*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)
*Note: All measurements based upon multi-modal images and methods. An average value is reported.				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)

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

	50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease persists with continued progression. The left heart disease is marked with progressive LA enlargement. The pulmonary pressures have increased as well with right heart enlargement. Finally, atrial fibrillation has developed, which is secondary to atrial dilation. No additional issues are identified.

Presumably atrial fibrillation was known previously as the patient has been place on both Diltiazem and Digoxin which are appropriate. While the average heart rate is slightly higher than what is targeted, both of the rate control dosage are maxed out and there is risk in increasing either medication. As an alternative, consider increasing Sildenafil to TID dosing with an increase in Spironolactone. Continue all additional medications as prescribed. It is worth mentioning that this patient is considered end-stage (stage D), and we are simply trying to maintain quality of life for the short-term. If we are unable to do so and the patient continues to decline, euthanasia should be elected. The average survival time at this point is a matter of weeks to months, with high risk for CHF, development of arrhythmias, syncope and/or sudden death.

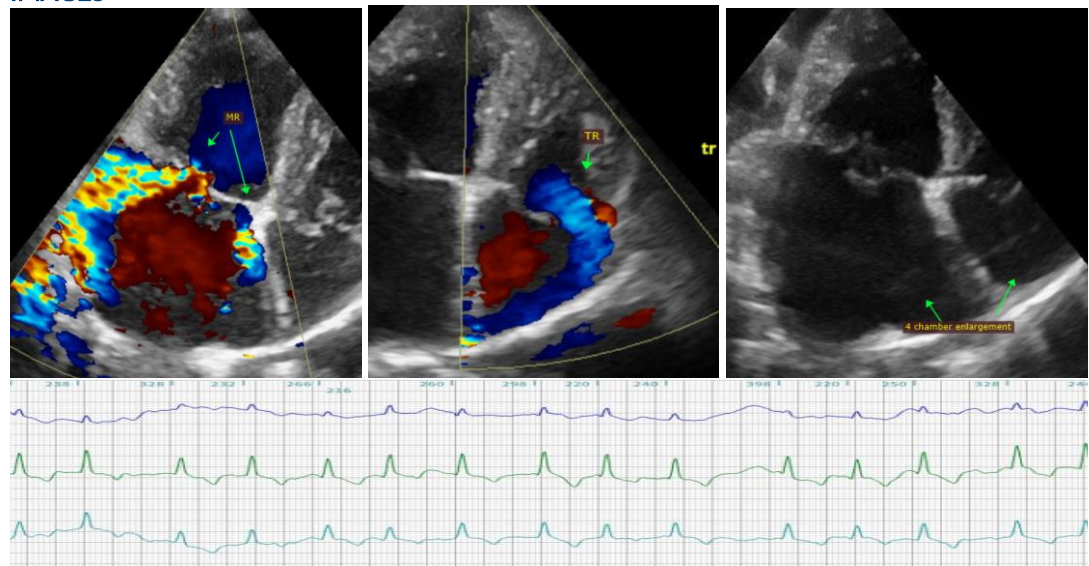
PLAN

Increase Sildenafil to q8h. Increase Spironolactone to q12h. Continue Digoxin, Diltiazem, Hydrocodone, Pimobendan and Enalapril as prescribed. Monitor blood pressure as hypotension would require a dose adjustment or discontinuation of Enalapril.

Monitor renal values, BP and heart rate ever 3-4 months going forward. Monitor digoxin levels every 6 months. Consider euthanasia if quality of life suffers.

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

IMAGES





PATIENT

Rocko Bandbaz

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.

SPECIES

Canine

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.

BREED

Chihuahua

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com

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