



PATIENT

Quinn O'Neil

SPECIES

Canine

BREED

Golden Retriever

SEX

Female

AGE

9 years

WEIGHT

74.5lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Jacque Pankatz,
DVM

HOSPITAL NAME

Mountain Vista
Veterinary Hospital

REFERRING VET

Dr. Pankatz

INVOICE

26471

DATE

9/21/22

PRESENTING CLINICAL SIGNS

History: Was presented for routine physical exam when an arrhythmia was noted on auscultation. A heart murmur was not noted. Pet has been an Acana brand diet, but formulation not confirmed. ECG and chest rads were performed. The patient panted profusely during the exam despite giving 0.2mg/kg butorphanol IV.

- Chest radiographs: Moderate LAE; pulmonary edema not appreciated.
- ECG (IDEXX): Atrial fibrillation with a heart rate of 260bpm.
- Current medications: Diltiazem was recommended 1-1.5mg/kg q8hrs.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with no prolapse into the left atrial lumen. Severe mitral regurgitation with severe left atrial dilation. Moderate LV dilation with adequate systolic function. The tricuspid valve appears mildly thickened, with moderate tricuspid regurgitation. TR velocity consistent with early pulmonary hypertension. Moderate right heart dilation. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities. No aortic or pulmonic insufficiency. No pericardial or pleural effusion. No cardiac tumors observed. Rapid irregular tachycardia throughout.

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	6.2	3.0	2.6	2.6	38	68	0.9
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	NM	2.3	1.3	33.8	4.5	5.6	3.5
*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)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing severe mitral and moderate tricuspid regurgitation. Severe CVD has progressed to 4 chamber dilation, and consequently a rapid arrhythmia (AF) has developed. Moderate right heart dilation is also noted; however, this is suspected to be



PATIENT	secondary to tachycardia. The systolic function is adequate; however, a diet change remains the conservative recommendation. No additional issues are identified.
Quinn O'Neil	
SPECIES	Given the development of an arrhythmia and severity of structural disease seen, this patient is at high risk for congestive heart failure, even without reported congestion on CXR. It is important to note that right-sided congestion (effusions) develops secondary to the arrhythmia, while left-sided congestion (pulmonary edema) develops due to structural disease. Going forward, aggressive therapy is recommended as below, even without reported clinical signs. The importance of rate control with rapid AF cannot be stressed enough. Without rate control it will be difficult to manage the case appropriately. Treatment should be dictated by the ECG report.
Canine	
BREED	
Golden Retriever	
SEX	Unfortunately, dogs with CHF and arrhythmias are at high risk for complications such as recurrent congestive heart failure, malignant arrhythmias and sudden death. Medications and close monitoring will help give the best prognosis possible, however the average survival time with this condition is <6 months.
Female	
AGE	Goals of therapy include correcting water retention, improving myocardial contractility, and afterload reduction. Medical management is recommended as below with a guarded to poor prognosis. No clinical signs are mentioned; however, if the patient appears unstable hospitalization for rate control may be necessary. If declined, I have listed oral medications as below.
9 years	
WEIGHT	Monitor at home for cough, lethargy, inappetence, collapse/fainting episodes or increase in respiratory rate or effort. Monitoring of sleeping breathing rates is recommended to screen for recurrent CHF at home. Moderate activity restriction is advised. Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
74.5lbs	
INTERPRETED BY	PLAN
Maggie Machen Lamy, DVM, DACVIM (Cardiology)	Immediate rate control is recommended as dictated by the ECG report. Consider hospitalization for IV diuretic/rate control therapy. Diet change recommended.
IMAGING PERFORMED BY	Oral medications: Institute Spironolactone 1-2mg/kg PO q12h. Administer Furosemide 1-2mg/kg PO q8h for 3-5 days, once doing well at home decrease to q12h. Administer Pimobendan 0.2-0.3mg/kg PO q12h.
Jacque Pankatz, DVM	
HOSPITAL NAME	Recheck renal panel/BP in 10-14 days to ensure tolerance of medications. If BP >130mmHg, recommend ACE-I 25mg PO q12h. If <130mmHg discontinue and do not utilize until patient is normotensive and eating well at home.
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REFERRING VET	Monitor renal values every 3-4 months lifelong. A recheck echocardiogram is recommended in 4-6 months to screen for progression.
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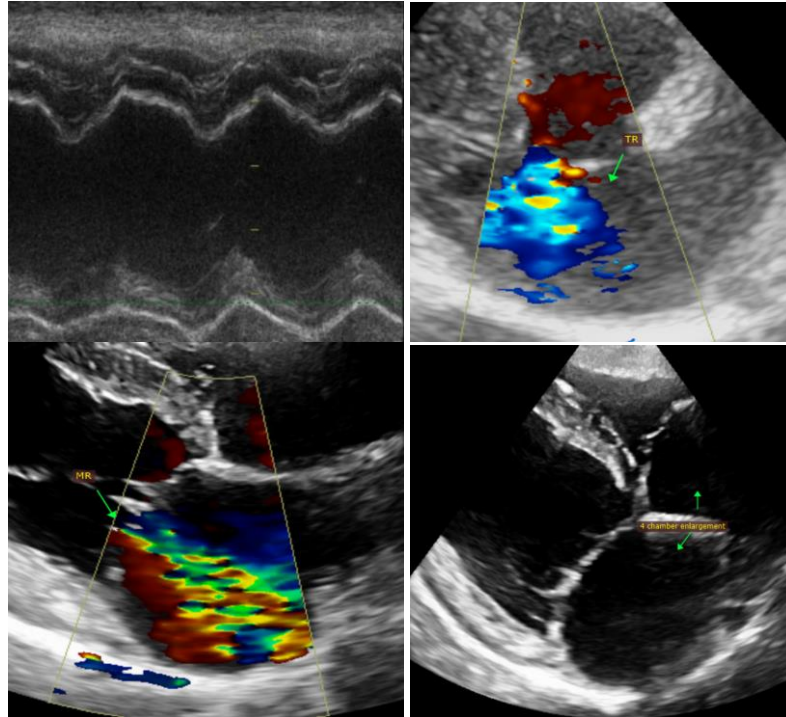
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IMAGES



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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.

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