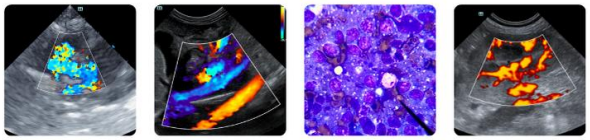


PATIENT

Jax Holton

SPECIES

Canine

BREED

Staffordshire Terrier

SEX

Male Neutered

AGE

11 years

WEIGHT

80lbs

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY

Julia Bakker, DVM

HOSPITAL NAME

Orange Blossom Veterinary Imaging

REFERRING VET

Dr. Galindo

INVOICE

47220

DATE

3/12/26

PRESENTING CLINICAL SIGNS

History: Presented with respiratory distress and appears to be in heart failure. Was coughing and retching on exam. CXR suspicious of pulmonary edema. Irregular arrhythmia and tachycardia. Grade 2/6 heart murmur. Started Lasix. BNP (12/2025): 3031.

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only.

Cardiomegaly with concern for CHF.

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

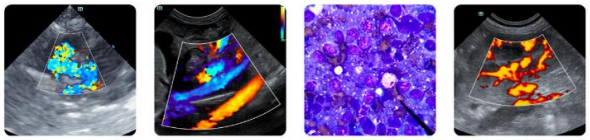
Short photos of a single lead ECG is available; 25mm/s, 10mm/mV. The average heart rate is 180bpm (range is 140-250bpm) with an irregularly irregular rhythm. No identifiable P waves, most consistent with atrial fibrillation. Isolated VPCs are noted.
ECG diagnosis: Suspect atrial fibrillation with isolated VPCs.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with minimal prolapse into the left atrial lumen. Moderate mitral regurgitation. Moderate left atrial dilation. Normal MR velocity. Moderate LV dilation in both systole and diastole with moderately depressed myocardial function. The tricuspid valve appears mildly thickened with trace TR. Mild right atrial and ventricular dilation. No obvious RVH. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No obvious aortic or pulmonic insufficiency. No pericardial or pleural effusion. No obvious cardiac masses.

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	5.0	NA	NM	1.75	22	40	0.2
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	1.4	1.5	36.3	4.2	5.1	4.0
*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)
Adapted from June Boon, Veterinary Echocardiography, 1998				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435				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)



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Hansson et al, Vet Rad and Ultrasound 2002	40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
Bonagura et al. Echocardiography: principles of interpretation, Vet	50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

First there is chronic degenerative valve disease causing moderate mitral and trace tricuspid regurgitation. The degree of disease is moderate with an increased LA dimension. The LV is also dilated with evidence of dysfunction.

The provided ECG is a single lead in short snippets, which is not ideal for interpretation. What can be said is there is an irregular rhythm present with dramatic variation in ventricular rate. While atrial fibrillation is expected, this is somewhat of an unusual presentation, given the totality of the findings (ie only moderate disease). There are also single VPCs, which do not warrant therapy.

In total I would strongly suggest further workup of this case. A Radiologist review of the films is suggested to ensure an alternative pathology is not at play. Additionally, referral for a six-lead tracing would be ideal to ensure the diagnosis is accurate. Again, none of these findings are expected given the moderate nature of the structural disease; however, potentially the combination of issues is truly leading to decompensation. If declined, simply administering full cardiac support as below is recommended to assess for a positive response. If the patient is or becomes unstable, hospitalization should be considered.

Unfortunately, dogs with CHF and AF are at high risk for complications such as recurrent congestive heart failure, malignant arrhythmias, left atrial tear 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.

Goals of therapy include correcting water retention, improving myocardial contractility, afterload reduction, and heart rate control if deemed necessary by further evaluation. Full cardiac support is recommended as below.

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.

PLAN

Consider hospitalization and/or referral and further workup as discussed. At a minimum, a Radiologist review of the films is recommended. If declined, full cardiac support should be utilized as follows: Institute Spironolactone 1-2mg/kg PO q12 hours. Administer Lasix 1-2mg/kg PO q12h going forward. Administer Pimobendan 0.3mg/kg PO q12 hours. Institute low dose Diltiazem 1mg/kg PO q8-12h and assess response.

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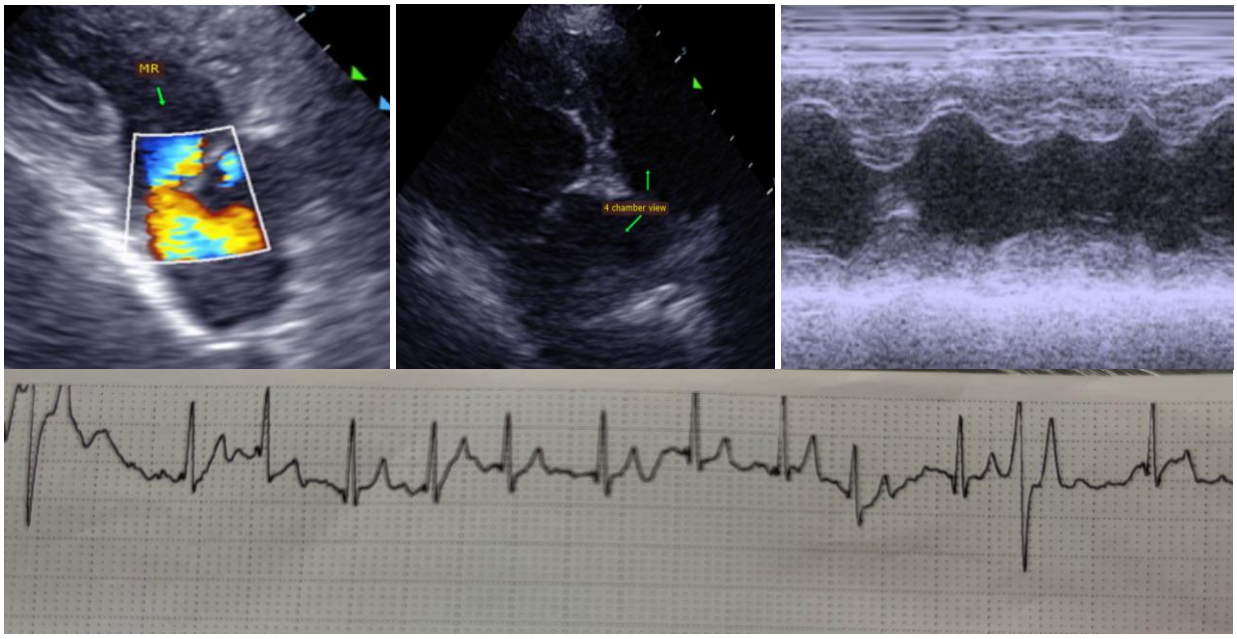
Monitor renal values, BP and ECG should be assessed in 1-2 weeks, every 3-4 months lifelong. Once eating well at home and BP is documented > 130mmHg, institute Benazepril 0.5mg/kg PO Q12h.

A recheck echocardiogram is recommended in 6 months to screen for progression.

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

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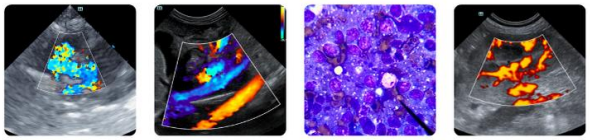

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