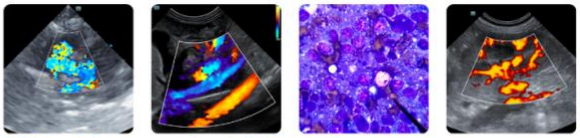

SonoPath www.carolinavetmobile.com info@carolinavetmobile.com 800.808.5948

PATIENT

Minka Shoemaker

SPECIES

Canine

BREED

Boxer

SEX

Spayed Female

AGE

11 Years

WEIGHT

51 Pounds

INTERPRETED BY

Sara Brethel DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY

Kathleen Byrnes

HOSPITAL NAME

Shallowford AH

REFERRING VET

Dr. Eads

INVOICE

35389

DATE

1/13/26

PRESENTING CLINICAL SIGNS

History: P presented for 2nd opinion- has MCT on caudal mammary chain. History of arrhytmia, PU/PD.

Abnormal PE/Chem/CBC/UA Results: usg 1.011

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE CARDIAC PARAMETERS	**MR VMAX** (m/s)	**TR VMAX** (m/s)	**LA/AO** (M-Mode)	**LA/AO** (Heart Base; Swe)	**FS** (%)	**EF** (%)	**EPSS** (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	Underest	--	--	1.72	19.12	--	--
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (kg)	**LAD** LA MAX 4 Chamber	**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				
PATIENT	178	1.4	0.94	23.18	4.25	4.13	3.34

ECG Interpretation

Sinus rhythm with frequent ventricular premature complexes occurring isolated and as triplets of the ventricular triplets identified. There is evidence of R- on -T phenomenon.

Cardiac Presentation

The mitral valve leaflets are normal with mild mitral regurgitation centrally directed. There is no prolapse of mitral valve leaflets. The left atrial size is increased; however, the ratio is skewed due to the small aortic root. LV dimensions during diastole are within normal limits and systolic function is reduced in the face of mitral regurgitation. The left ventricle is hypodynamic without thinning of the left ventricular walls. There is mild right atrial enlargement without evidence of tricuspid regurgitation. The tricuspid valve leaflets are normal. There is no evidence of pulmonary hypertension on this evaluation. The right ventricle appears to have preserved systolic function subjectively. The aortic and pulmonic valves had normal morphology and the corresponding outflow velocities were within normal limits. There was no evidence of pulmonic or aortic insufficiency. The aorta appears normal. The pulmonary artery and associated branches appear normal. There is no evidence of pleural effusion, pericardial effusion, or intracardiac masses. The rhythm is irregular.

ULTRASONOGRAPHIC FINDINGS

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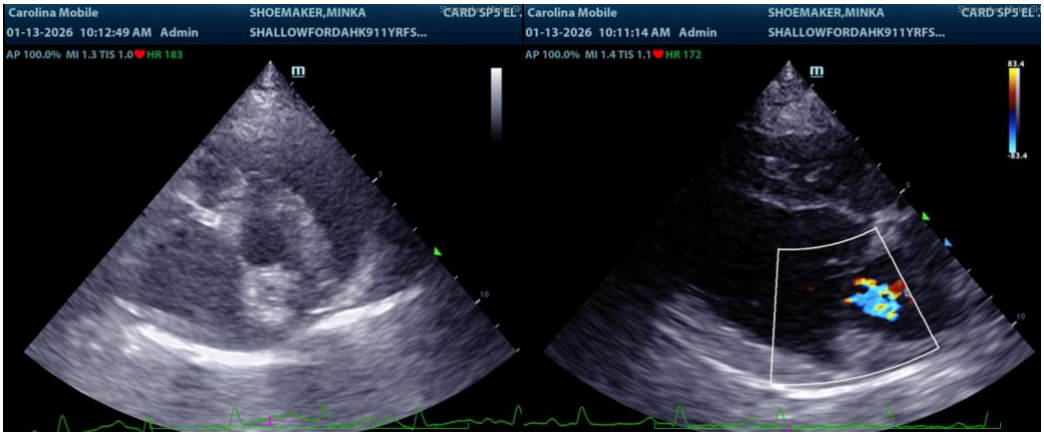
- DCM phenotype with left atrial enlargement
- Mitral regurgitation centrally directed
- Mild right atrial enlargement
- Ventricular premature complexes
- R-on-T phenomenon

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The patient is having Arrythmias. Given the triplet identified on the ECG, and the R-on-T, the patient is at an increased risk for complications, such as sudden cardiac death. An antiarrhythmic therapy with mexiletine at a dose of roughly 5.0 mg/kg, every 8 hours, is recommended. Additionally, there is a DCM phenotype. I recommend starting pimobendan at a dose of 0.27 – 0.32 mg/kg, twice daily. The cause of the dilation can be secondary to the patient's arrhythmias, primary arrhythmogenic cardiomyopathy, idiopathic DCM, dietary, infiltrative infectious versus inflammatory. Given the breed arrhythmogenic cardiomyopathy is prioritized as a top differential. Given the arrythmias and the systolic dysfunction, caution is advised for anesthetic procedures, however, if needed, the patient can undergo anesthesia. I would recommend the patient being on mexiletine for at least a week, along with the pimobendan. Ideally, a recheck ECG would be done in 3-4 weeks versus a Holter monitor. A Holter monitor does provide more information. Other differentials for the arrhythmia include electrolyte abnormalities or abdominal disease. Given the abdominal ultrasound also performed, this will help ensure that abdominal disease is not present. I do recommend ensuring full blood work and the patient's thyroid hormone is normal. A recheck echo should be done in 4-6 months, sooner if the patient is decompensating. Note, mexiletine is preferred over sotalol at this time, due to the patient's systolic dysfunction. It should be advised that mexiletine could cause GI upset. If there is significant GI upset, I recommend starting a probiotic and bland diet to try and transition them through that time frame of starting the medicine. If the patient continues to not tolerate mexiletine, we could consider switching to Sotalol.



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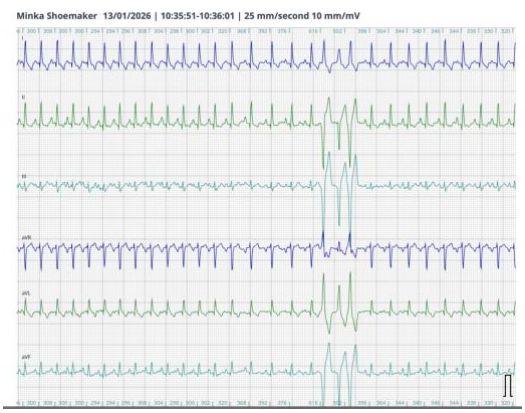

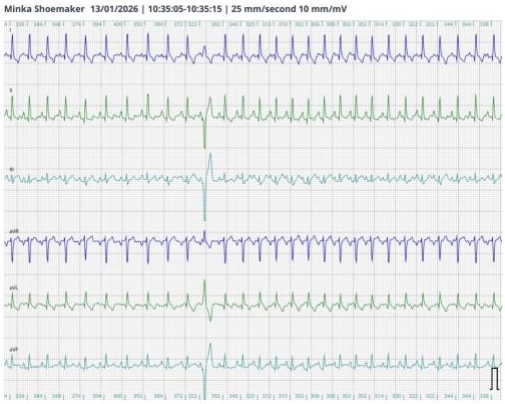

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

Sara Brethel DVM, DACVIM (Cardiology)

info@SonoPath.com