



PATIENT

Zoe Eschliman

PRESENTING CLINICAL SIGNS

History: Paroxysmal SVT on ECG (brief); occasional 2nd degree AV block, 1st degree AV block; holter recommended.

Echo results (EL): CVD B1

SPECIES

Canine

BREED

Lab Mix

SEX

FS

AGE

13 years

WEIGHT

64

HOLTER MONITOR FINDINGS AND RHYTHM ASSESSMENT

Time analyzed	23:59h
Mean heart rate	109bpm
Maximum heart rate	225bpm
Minimum heart rate	30bpm
VPCs	70; 67 early
APCs	72733; runs of SVT up to 240bpm

Interpretation: Underlying normal sinus rhythm with apparently appropriate rate variation (no diary provided). Frequent APCs with 1994 couplets and 7189 runs of SVT. Fastest run with a HR of 300bpm. Isolated VPCs throughout. Occasional AV block throughout; difficult to tell patient activity level during the block (ie 7:22pm). Brief sinus arrest at 8:36am.

Rhythm diagnosis: Sinus rhythm with frequent second degree AV block (low grade) and brief sinus arrest. Frequent atrial arrhythmias including paroxysmal atrial tachycardia (HR up to 300bpm) and singles/couplets of APCs. Occasional VPCs.

RECOMMENDATIONS

Paroxysmal supraventricular tachycardia (SVT) is noted, with a heart rate as high as 300bpm. SVT is an umbrella term indicating a narrow complex tachycardia arising from above the AV node with an atrial tachycardia is most likely. Occasional single VPCs are also noted; however markers of malignancy are low. Finally, there is AV block noted throughout and a brief period of sinus arrest (8:36am). IF this is during sleep this is less concerning; however, no diary is included.

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Given the totality of the findings, there is concern for underlying Sick Sinus Syndrome in this patient. SSS is idiopathic in origin, with progressive deterioration of the electrical system resulting in inappropriate tachycardia, bradycardia, intermittent lethargy and collapse. Typically SSS heart rates range from asystole to tachycardia as is seen here, making medical therapy difficult to utilize safely. Fortunately the patient is reportedly asymptomatic; however, this tends to be a progressive deteriorating disease leading to lethargy and collapse. Treatment of bradycardia (heart rate stimulants) can exacerbate inappropriate tachycardia, and is often an ineffective treatment. That being said, the holter shows tachycardia is a much more prevalent issue in this patient than brief bradycardia. Because of this, treatment with Diltiazem may be reasonable.

HOSPITAL NAME

Northshore VH

REFERRING VET

Dr. Kiffney

Given these findings, consider **referral to a local Cardiologist is recommended for consultation** of possible medical and/or surgical options should symptoms develop in the future. IF declined, cautious use of Diltiazem is recommended as below, with careful monitoring for any lethargy or collapse. If these develop, the medication should be discontinued and ECG/holter reassessment or referral elected. Any patient with electrical disturbances can experience progressive debilitating syncope and potentially sudden death and this should be expressed to the owner.

INVOICE

23642

DATE

4/13/22

Given only mild valve disease on the echocardiogram, there is no clear structural cause for this abnormality. The most likely scenario is that this is a primary arrhythmic issue; however, full systemic evaluation is recommended to ensure no exacerbating issues are brewing (such as neoplasia, GI



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inflammation, etc). Fortunately SVT tends to be less malignant than a VT; however any arrhythmic patient is at risk for syncope and sudden death. Prognosis is guarded pending obtaining control of the arrhythmia.

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Omega fatty acid supplementation may be of some long term benefit in arrhythmic animals. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

BREED

Lab Mix

Anesthesia is NOT advised.

SEX

FS

Plan: Recommend referral to a local cardiologist. If declined, institute diltiazem 1-2mg/kg PO q12h (30, 60, 90mg tabs available commercially). Recheck HR/ECG and/or holter in 2-4 weeks. Systemic evaluation as discussed. If any collapse or significant lethargy, immediate reassessment/referral is advised.

AGE

13 years

Recheck echocardiogram and ECG and/or holter in 6 months, sooner if any issues arise in the interim.

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SVT

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IMAGING PERFORMED BY

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.

HOSPITAL NAME

Northshore VH

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.

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

REFERRING VET

Dr. Kiffney

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