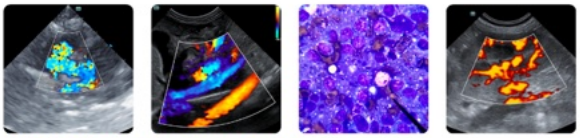

PATIENT

Ebony Heath

SPECIES

Feline

BREED

Domestic Shorthair

SEX

Neutered male

AGE

16 years

WEIGHT

9.2 lbs

INTERPRETED BY

Bradley Harris, DVM, DACVECC, DACVIM (cardiology)

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

Echo Hollow VH

REFERRING VET

Dr. Srch-Thaden

INVOICE

73838

DATE

3/27/26

PRESENTING CLINICAL SIGNS

- Clinical Exam Findings: Heart murmur grade 2-3/6, hyperthyroid controlled, new Heart Murmur
- -T4 3.6 ug/dL WNL, BUN 31 mg/dL mildly elevated, Cre 1.6 mg/dL, -HCT 34%
- HR 170. Grade II-III/VI heart murmur.
- Current Medications active Prescription for: Methimazole in Anh Lipoderm EZ Dose Micro Transdermal Gel 1.25 mg/0.05ml, 9 ml

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The left atrium is normal in dimension. There are no distinct left atrial thrombi/clots or spontaneous echo contrast appreciated. The left ventricle is normal in dimension, with equivocal wall thickness, and no evidence of restriction. Left ventricular systolic function is normal, with adequate contractility. The right atrium and ventricle are subjectively normal in dimension and systolic function. There is no evidence of systolic anterior motion of the mitral valve or other valve abnormalities with no mitral regurgitation. The tricuspid valve leaflets presented normal linear structure, extension in systole, and union in diastole with trace regurgitation. The left ventricular outflow tract demonstrated normal laminar flow and subjective structural valvular integrity. The visible aorta is unremarkable. Pulmonary outflow tract assessment revealed normal valve structure, laminar flow, and appropriate diameter and distensibility. There is no evidence of semilunar valve insufficiency or pulmonary hypertension documented. There is no visible pericardial, pleural, or free peritoneal fluid noted.

FELINE CARDIAC PARAMETERS	**BODY WEIGHT** (kg)	**HR** (BPM)	**IVSd** (cm)	**LVIDd** (cm)	**LVWd** (cm)	**FS** (%)	**EF** (%)
NORMAL PARAMETER	------	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT	4.18 kg	180	0.53	1.56	0.62	58	99
FELINE CARDIAC PARAMETERS	**LA/AO** (M-mode)	**LA/AO HEART BASE** (Sisson)	**LAD** LA MAX 4 Chamber		**LVOT VEL.** (m/s)	**RVOT VEL.** (m/s)	**IVRT** (m/)
NORMAL PARAMETER	<1.5	1.6	0.7-1.7		<1.6	<1.3	40-60
PATIENT	1.11	1.01	1.34		0.8	1.1	NM
Adapted from June Boon,Veterinary Echocardiography,1998 Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705							

ECG:
The underlying rhythm is sinus in origin with an average rate of 180bpm. The R-R intervals are regular, with a uniform P-R interval that is within normal limits. There is a single premature complex with a wide QRS (>40ms), consistent with a ventricular origin. There are no ventricular couplets or runs of tachycardia documented. There is no evidence of atrioventricular block or atrial ectopy documented.

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ULTRASONOGRAPHIC FINDINGS

- These findings are consistent with an essentially normal echocardiogram. The borderline/equivocal left ventricular wall measurements may represent an early manifestation of hypertrophic cardiomyopathy; however, may also represent a variation of normal for this patient. Additionally, a ventricular arrhythmia is noted. In cats, ventricular arrhythmias are usually secondary to underlying structural heart disease. Causes include cardiomyopathy (e.g., hypertrophic, restrictive, arrhythmogenic, dilated) or secondary myocardial disease (e.g., hyperthyroidism, hypertension). Rarely, ventricular arrhythmias develop secondary to extracardiac conditions (e.g., neurologic disease, metabolic disease, fever, anemia, trauma, GI disease, DIC and sepsis).

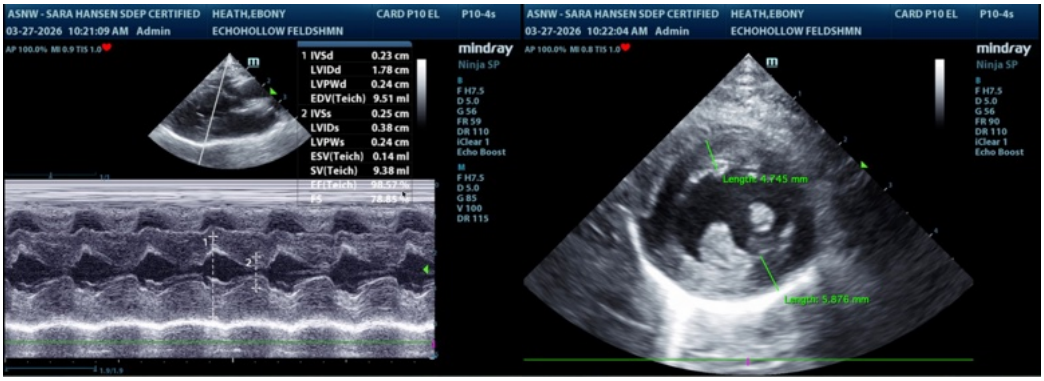
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the absence of any underlying heart disease, no cardiac therapy will be recommended. In addition, there are no cardiac objections to fluid therapy or steroid use. Owing to the presence of a equivocal wall thickness, a follow up echo is recommended in another 6-12 months to make sure no progression has occurred. While therapy for the single VPC is not specifically indicated based on these findings, further diagnostics might help tailor therapeutic recommendations. Consider the following:
- Abdominal ultrasound to look for abdominal causes of VPCs (e.g., splenic/adrenal changes)
- Consider 24-48 hour ambulatory ECG (Holter) monitor to assess the severity of the arrhythmia

Anesthesia considerations:
If anesthesia is necessary, then alpha-2 agonists, ketamine, high dose acepromazine, and Telazol should be avoided. Fluid therapy during anesthesia should be considered at a reduced rate (e.g., 5 ml/kg/hour) if possible (i.e., if not hypotensive). A shorter anesthetic duration will reduce the risk of complications. Pre-oxygenation is advised. Premedication with an opioid (i.e., butorphanol, hydromorphone, oxymorphone) with or without a benzodiazepine is generally the safest protocol. An induction agent such as Propofol, alfaxalone can be used to effect. Maintenance of anesthesia with isoflurane or sevoflurane is reasonable.

Diet:
No special considerations are necessary. Any high-quality food from Hills, Royal Canin, Science Diet, Eukanuba, Iams, or Purina is reasonable.

Activity:
No special considerations are necessary.



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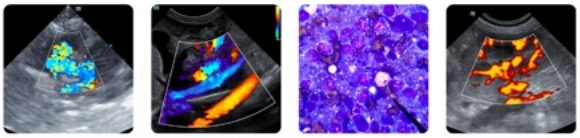

Clinical Sonography & Telecytology
Educational Teleconsultation Services™

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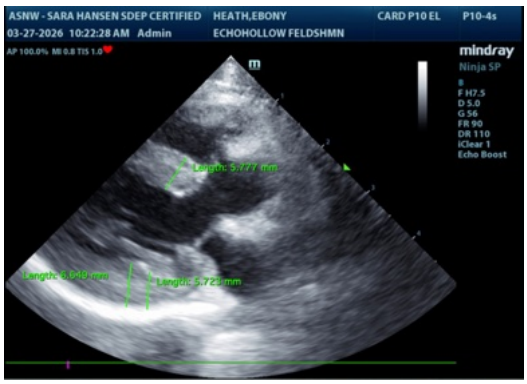

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Bradley Harris, DVM, DACVECC, DACVIM (cardiology)

info@SonoPath.com