



PATIENT

Precious Parrish

SPECIES

Feline

BREED

DSH

SEX

MN

AGE

18 years old

WEIGHT

7.6 lbs.

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Kim Liedberg

HOSPITAL NAME

SVS Imaging WI

REFERRING VET

Dr Sobon, New
Berlin AH

INVOICE

13156

DATE

1/25/22

PRESENTING CLINICAL SIGNS

Heart murmur noted, Hyperthyroidism CKD, Dental Disease Heart work up to check if medications are needed. Anesthesia safe protocol to use.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

| 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 | | 188 | 0.42 | 1.37 | 0.43 | 41.6 | 75.9 |
| FELINE CARDIAC PARAMETERS | LA/AO (Boon) | LA/AO HEART BASE (Sisson) | LA 2D 4-chamber long axis AS to FW (Sisson) (cm) | LVOT VEL. (m/s) | RVOT VEL. (m/s) | IVRT (m/) | |
| NORMAL PARAMETER | <1.5 | 0.88-1.79 | 0.7-1.7 | <1.6 | <1.3 | 40-60 | |
| PATIENT | 1.48 | 1.48 | 1.6 | 1.0 | 0.72 | 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 | | | | | | | |

Cardiac Presentation

The echocardiogram in this patient demonstrated enlarged **left atrial** size based on 3 separate LA measurements. The cranial and caudal **mitral** valve leaflets presented subtle thickening with normal kinetics. Trace MR was present on color doppler assessment. The **left ventricular** septum and free wall revealed adequate contractility with normal ventricular volume yet generalized echogenic remodeling of the septum and free wall were noted with regions of irregularity and generalized Increased endocardium echogenicity. This was most prominent in the area of the basilar IVS. This is most consistent with some level of **myocardial fibrosis**, which is an age-related change. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed increased size and normal content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinetics. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted or extra cardiac pathology in the visible planes. The cranial **mediastinum and pericardial regions** were free of masses in the visible window. Intermittent to consistent arrhythmia was present.



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ULTRASONOGRAPHIC FINDINGS

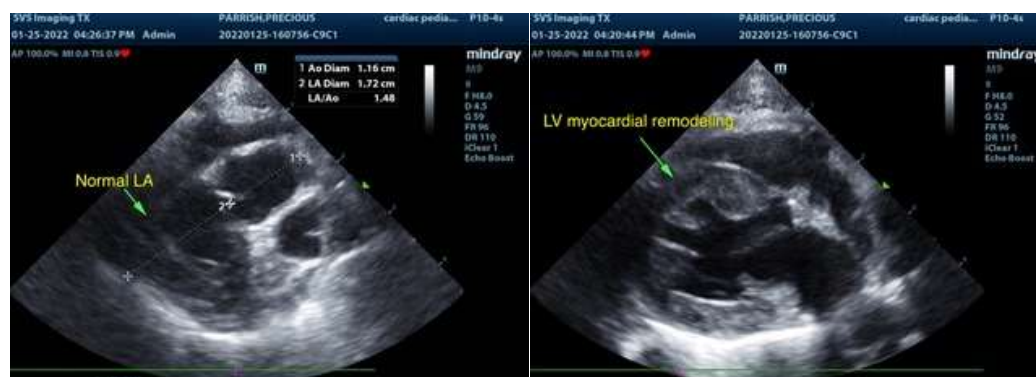
Primary Findings

- LV myocardial remodeling with mild basilar IVS hypertrophy
- Normal left atrium size
- Intermittent to consistent arrhythmia

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cardiac presentation specifically the appearance of the left ventricle may indicate age-related myocardial remodeling and fibrosis, although this may also represent a form of HCM, given the patient's history of hyperthyroidism. No overt evidence of systolic anterior motion (SAM) of the mitral valve was present. A definitive cause of the murmur was not overtly evident. A physiological flow murmur or potential small flow abnormality not visualized is possible. The subjectively adequate LV contractility, as well as no evidence of left or right heart chamber enlargement, indicate that the cardiac presentation at this time is well compensated and current risk for congestive heart failure and/or thrombus formation appear to be relatively low. No overt indication for cardiac medications was evident. Assessment of both systemic blood pressure and, if not recently done, T4 levels are advised to rule out possible contributing factors. Further assessment of arrhythmia with ECG analysis and cardiology consult/interpretation is recommended prior to any potential anesthesia. If the patient is deemed safe for anesthesia, the following anesthetic protocol is suggested. Recheck echocardiogram is suggested in 4-6 months, sooner if clinical signs compatible with cardiac dysfunction develop.

Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.





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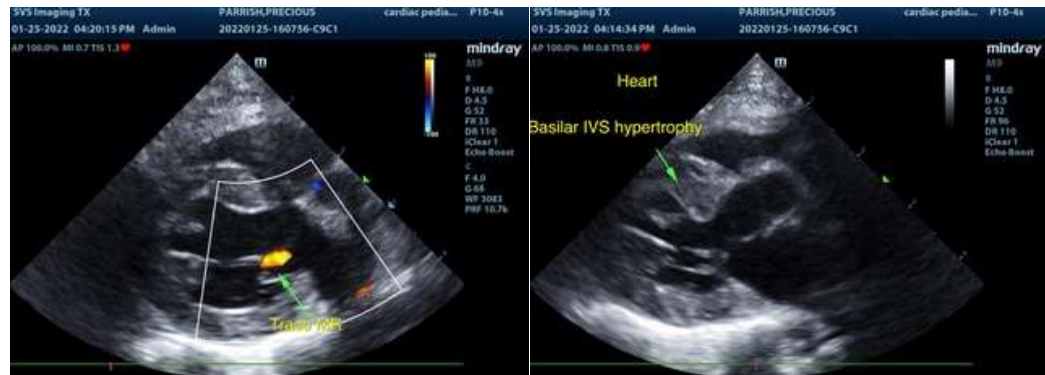
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com