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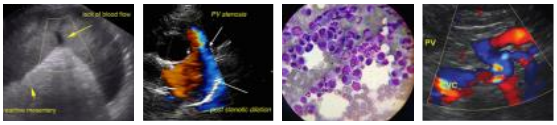


ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT

Fawkes Lundy

SPECIES

Feline

BREED

DMH

SEX

Spayed Female

AGE

7 Years

WEIGHT

3.88 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

Wilvet of Salem

REFERRING VET

Wilvet of Salem

INVOICE

13405

DATE

1/13/22

PRESENTING CLINICAL SIGNS

History: Fawkes is a 7-year-old SF DMH who is transferred from Salem ER for continued care of an anal gland abscess and CHF. Fawkes presented to Salem ER for about 8-12 hours of lethargy, tachypnea, and severe dyspnea with abdominal effort. There is no known vomiting and she had been eating well before these clinical symptoms started. Fawkes had a recurring and self-resolving weepy eye with an occassional isolated sneeze (one sneeze/week) for about 4-6 weeks. Her symptoms were not severe and resolved without tx and so she was not taken to her rDVM for them. There are two other cats in the house that have not had these or any other symptoms. She was found be be febrile and have a right sided anal gland abscess at Salem ER. It has been clipped/cleaned, likely because she was dyspneic/to avoid stress. Current Medications clopidogrel, Pimobendan and Miratazapine

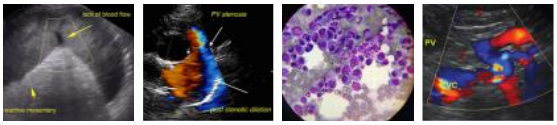
ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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	--	226	0.55	1.4	0.37	31.4	63
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	1.6	1.97	1.6		1.0	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

Cardiac Presentation

The echocardiogram in this patient demonstrated subjective mild to moderate **left atrial** enlargement based on 2 separate LA measurement methods. The cranial and caudal **mitral** valve leaflets presented mild subjective thickening yet normal kinetics. No overt evidence of systolic anterior motion (SAM) of the mitral valve was evident yet cannot be definitively excluded. Mild centralized to eccentric mitral valve insufficiency was present on color doppler assessment. The **left ventricular** septum and free wall revealed subnormal contractility, subjective normal left ventricle volume with generalized echogenic to focal hyperechoic remodeling of the septum and free wall. Focal mild basilar IVS hypertrophy and potential area of fibrosis present within area of LV outflow tract. Prominent to remodeled papillary muscles were present. This is most suggestive of some level of generalized to focal **myocardial fibrosis**. The **left ventricular outflow** tract demonstrated mild turbulent to dynamic systolic flow with normal 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



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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.

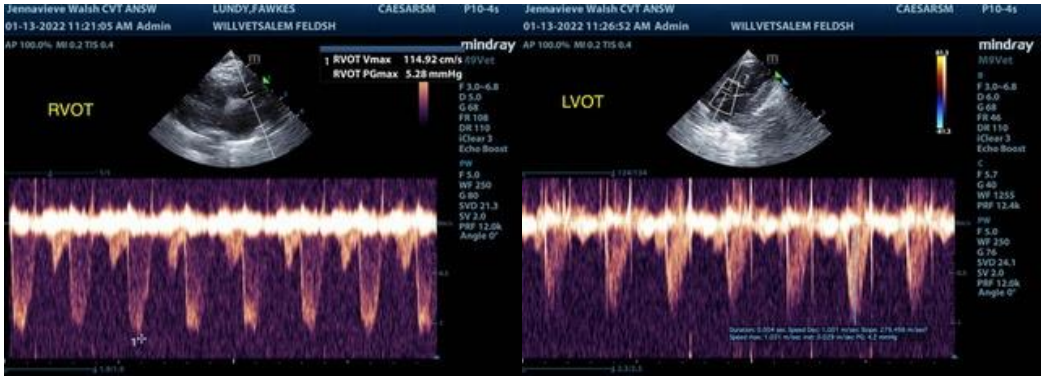
ULTRASONOGRAPHIC FINDINGS

- Significant generalized LV myocardial remodeling, focal basilar IVS hypertrophy and possible fibrosis
- Prominent to remodeled papillary muscles
- Subjective LV systolic dysfunction
- Mild/moderate LA enlargement- no evidence of spontaneous contrast/thrombus

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cardiac presentation in this patient may indicate generalized LV myocardial remodeling and fibrosis. Although, potential for progressive to end-stage HCM/HOCM may present in similar sonographic manner. Given the LV systolic dysfunction in combination with LA enlargement, the respiratory abnormalities in this patient certainly could be cardiogenic in origin, although potential for multifactorial component to the respiratory abnormalities cannot be excluded. Correlation with monitoring of thoracic radiographs advised.

In addition to current medications, diuretic trial (at lowest effective dose) with assessment of clinical response and monitoring of renal parameters warranted. Beta blocker medication is not recommended given its negative ionotropic effects which may push the patient into further cardiac decompensation. Hospitalization with (as needed) supportive care until patient is stabilized (if in respiratory distress) recommended. Assessment of systemic blood pressure and T4 levels suggested to rule out concurrent contributing factors to cardiac presentation. Pending clinical response to therapy, recheck echo may be considered in 6-8 weeks or sooner if continued signs suggestive of cardiac disease or continued respiratory abnormalities.



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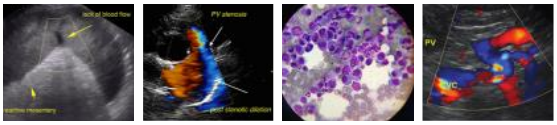

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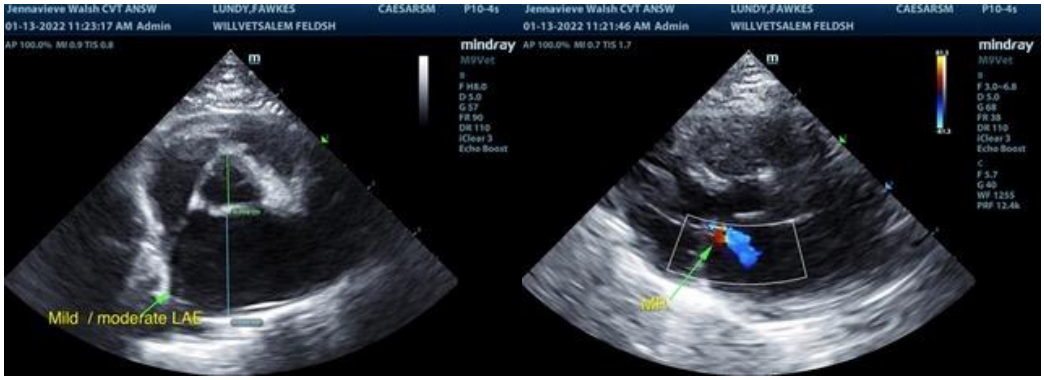

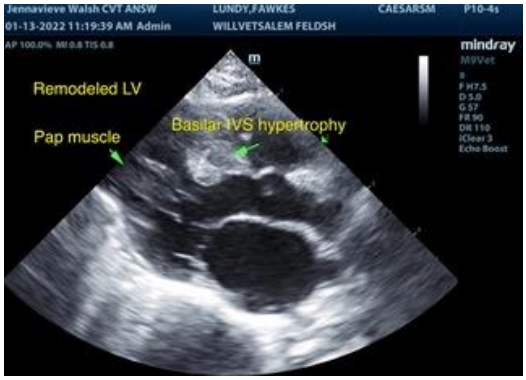

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. 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