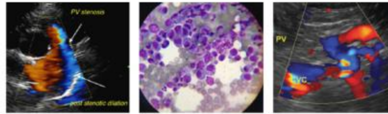
IMAGING PERFORMED BY
svsmobileimaging.com 309 - 737 - 3070



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT
Elvira McKeag

SPECIES
Feline

BREED
DMH

SEX
Female Spayed

AGE
17 years

WEIGHT
7lbs

INTERPRETED BY
Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY
Sarah Pender, CVT

HOSPITAL NAME
SVS Imaging QC

REFERRING VET
Dr. Kulemin

INVOICE
28150

DATE
1/6/23

PRESENTING CLINICAL SIGNS

History: Heart murmur (II/VI), not ausculted prior to Dec. 9, 2022.
-Abnormal PE/Chem/CBC/UA Results (9/22/22): Moderate/stable CRD/azotemia. SVS Abdominal ultrasound 10/14/22, following bought of dysuria/voided blood clots and tissue. (Symptoms have resolved.). (1/6/2023): RBC 4.46 Low, HCT 26% Low, HGB 8.9 Low, SDMA 20 High, CREA 3.1 High, BUN 67 High T4 WNL

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is asymmetric with a normal septal dimension and marked free wall hypertrophy. The LV chamber is decreased with adequate myocardial function. There is a diffusely hyperechoic endocardium consistent with fibrosis. Symmetric papillary muscle hypertrophy. There is marked left atrial enlargement present. Subtle smoke visualized; no obvious blood clots. RA is mildly enlarged with mild RV pathology as well. There is no obvious systolic anterior motion (SAM) of the mitral valve present, with a normal LVOT velocity. There is trace mitral regurgitation present. Trace TR. No other obvious valvular regurgitation is present. The MPA and branches are normal. There is no pericardial effusion noted. No pleural effusion appreciated. No obvious cardiac tumors.

CARDIAC CHART

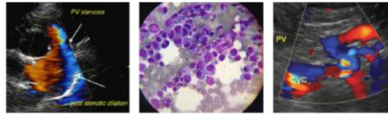
FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) (Moise, Pipers)	LVIDd (cm) (Moise, Pipers)	LVWd (cm) (Moise, Pipers)	FS (%)	EF (%)
NORMAL PARAMETER	------	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	3.2	170	0.55	1.0	1.0	40	90
FELINE CARDIAC PARAMETERS	**LA/AO** (Boon)	**LA/AO HEART BASE (Swe)** (Abbott)	**LA** 2D short axis Base view (cm) (Abbott)		**LVOT VEL** (m/s)	**RVOT VEL** (m/s)	**E max** (m/s)
NORMAL	<1.5	<1.3	<1.2		<1.6	<1.3	<0.9
PATIENT	NM	2.8	2.3		0.44	0.4	NM

**Note: All measurements based upon multi-modal images and methods. An average value is reported.*
Adapted from June Boon, Veterinary Echocardiography,1998
Abbott J & MacLean H JVIM 2006;20: 111-119, Moise et al. Am J Vet Res 47:1476, 1986. Pipers et al. Am J Vet Res 40:882, 1979.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Hypertrophic cardiomyopathy (HCM) is a rule out diagnosis for LV hypertrophy once a patient is confirmed euthyroid and normotensive. In a controlled hyperthyroid cat, a BP is strongly recommended. Regardless, the left atrium is marked enlarged with subtle spontaneous contrast, indicating high risk for spontaneous CHF and/or blood clot events going forward. The right heart is also affected, albeit to a lesser extent.

Given these findings and exceedingly high risk for decompensation, ideally full cardiac support would be considered including low dose Lasix therapy even without respiratory signs. That being said, the patient is azotemic already and because of this withholding Lasix/ACEI is suggested. With this degree of disease, patient will always be at high risk for CHF, development of blood



PATIENT

Elvira McKeag

SPECIES

Feline

BREED

DMH

SEX

Female Spayed

AGE

17 years

WEIGHT

7lbs

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY

Sarah Pender, CVT

HOSPITAL NAME

SVS Imaging QC

REFERRING VET

Dr. Kulemin

INVOICE

28150

DATE

1/6/23

clots and/or malignant arrhythmias/sudden death in the future. Monitoring of sleeping breathing rates at home is recommended as the best way to screen for recurrent CHF at home.

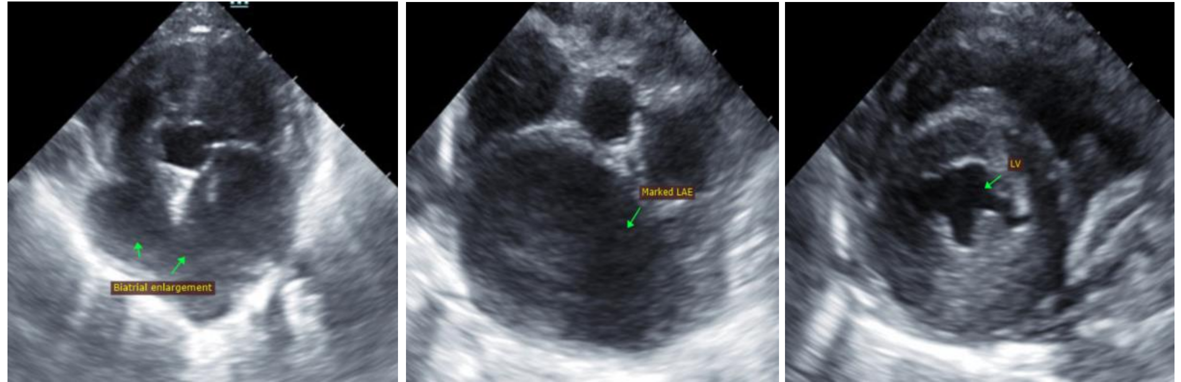
Elected Anesthesia, fluid and/or steroid therapy is not advised in this patient.

PLAN

Administer Plavix to decrease risk of thrombi formation: Plavix 75mg ¼ tab SID (NOTE: bitter on cut edge, coat in entirety or administer in a gel cap). Administer Pimobendan 1.25mg PO q12h. If any change in RR/RE, administer Lasix 1mg/kg PO q12h. BP strongly recommended.

A recheck echocardiogram is recommended in 6 months to assess for progression, sooner if clinical signs arise.

IMAGES



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.

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