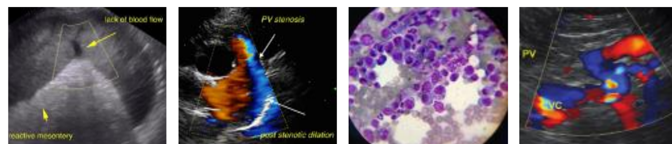
SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com™

1-800-838-4268 info@sonopath.com

PATIENT

Cleopatra Griffiths

SPECIES

Feline

BREED

DSH

SEX

Female Spayed

AGE

11 years

WEIGHT

7lbs

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY

Dr. Karen Ebersole

HOSPITAL NAME

Scanvet

REFERRING VET

Dr. Lipovsky

INVOICE

26405

DATE

9/15/22

PRESENTING CLINICAL SIGNS

History: Grade 3/6 heart murmur. Owner reports several episodes of acute onset lameness/unable to use limb, then seems to pass. Concern for possible thromboembolism. Assess prior to anesthesia.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with minimal prolapse into the left atrial lumen. Moderate to severe eccentric mitral regurgitation with moderate left atrial dilation. Echogenic material seen within the left atrium in some views. Normal MR velocity. Moderate LV dilation with adequate myocardial function. LV walls are normal in diameter with diffuse remodeling. The tricuspid valve appears normal with trace tricuspid regurgitation. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. Trace aortic and no pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

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	NM	0.32	2.1	0.35	45	79
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	1.36	1.8	1.5			0.62	NM

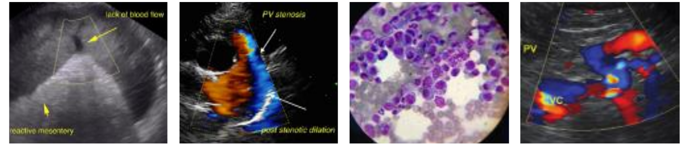
**Note: All measurements based upon multi-modal images and methods. An average value is reported.*

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

The cause of the murmur is moderate to severe mitral regurgitation. MR in cats is typically due to either MV dysplasia (abnormal morphology from birth), secondary to abnormal valve motion (SAM/HOCM) or represents age-related degeneration as is seen in dogs. The valve appears thickened with minimal prolapse, making a primary or degenerative issue most likely. Serial monitoring is advised. If the murmur had persisted lifelong, I would suspect the former however this remains unclear. Regardless, the LA is moderately dilated, putting this patient at risk for issues going forward. There is normal wall thickness, ruling out typical hypertrophic disease. Serial echocardiography will be helpful to confirm the diagnosis and assess for progression. Hyperechoic tissue is seen along the left atrial wall, although this is inconclusive. Smoke or a thrombus is considered unlikely with this degree of atrial dilation; however, there is certainly suspicion given the history.



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These findings may suggest a cardiogenic thrombus is the cause for recurrent limb lameness. This is difficult to prove; however, Plavix is certainly warranted going forward. Additionally, Pimobendan and an ACE-I are recommended for potential long-term benefit, pending blood pressure assessment.

Going forward there will always remain risk for progression to CHF and development of blood clots in the future. Monitoring of sleeping breathing rates at home is recommended as the best way to screen for recurrent CHF at home. Long term prognosis with LA dilation is guarded, however most are able to maintain a good quality of life on medications.

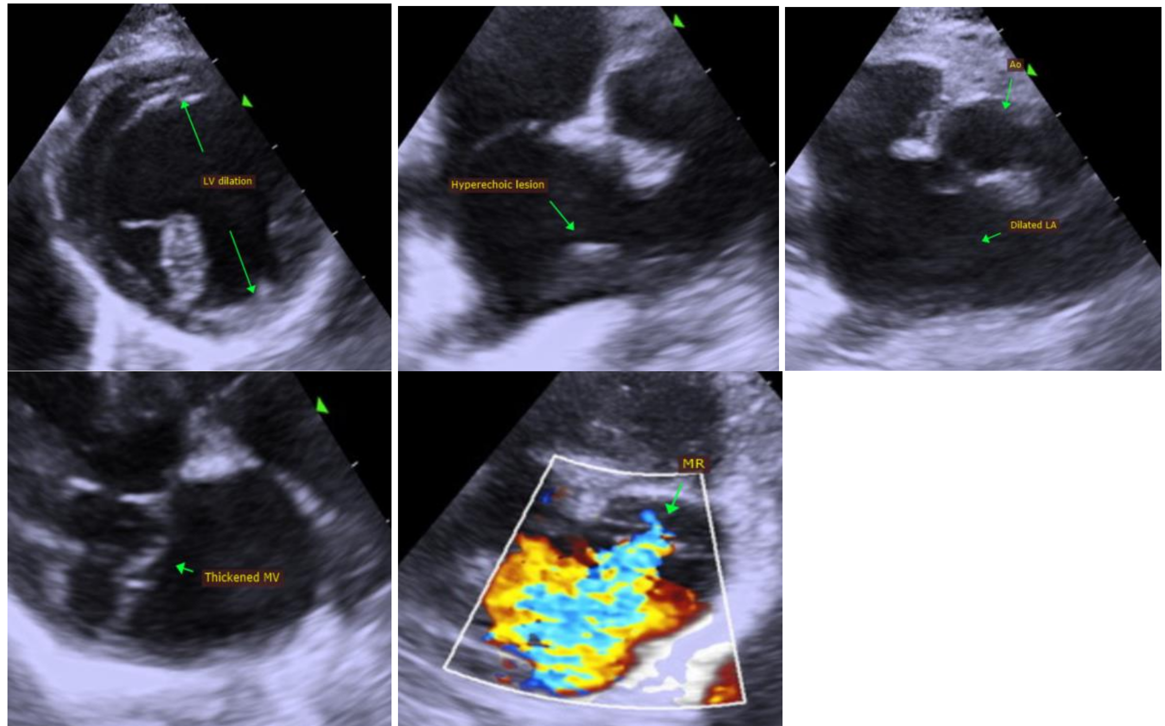
Anesthetic risk is considered elevated, with high risk for fluid overload, spontaneous CHF, hypotension, etc. If you elect to proceed, institute the medications 1 week prior and reassess renal values/BP prior to proceeding Judicious IV fluid rates are advised to avoid fluid overload. Drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid ketamine, telazol, acepromazine and Dexdomitor.

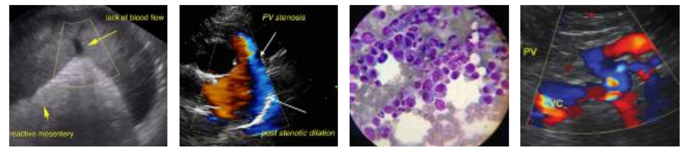
PLAN

Baseline BP recommended. Institute blood thinner Clopidogrel (Plavix) 75mg tablets; give ¼ tab orally once daily (NOTE: this medication is very bitter on the cut edges). Institute Pimobendan 1.25mg PO q12h. Pending BP >130mmHg, institute vasodilator ACE-I (benazepril or enalapril) 2.5mg PO BID.

A recheck echocardiogram is recommended in 6 months to assess for progression.

IMAGES





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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. This report was generated using transcription software, and minor dictation errors may be present. 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