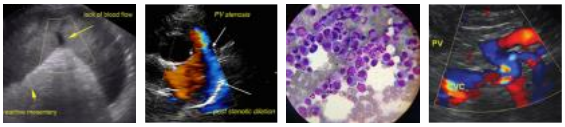
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



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

PATIENT
Mochi Chapman

SPECIES
Feline

BREED
DSH

SEX
Female Spayed

AGE
2 years

WEIGHT
11.1lbs

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

IMAGING PERFORMED BY
Jenna Walsh, CVT

HOSPITAL NAME
West Eugene Animal Hospital

REFERRING VET
Dr. Bruce

INVOICE
32463

DATE
8/21/23

PRESENTING CLINICAL SIGNS
History: Grade 3/6 heart murmur. ProBNP: 407.

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.
A single lead ECG is available; 50mm/s, 20mm/mV. The average heart rate is 200bpm with a regular rhythm. The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P and QRS morphologies are positive. No ectopic beats, pauses or dysrhythmias observed. ECG diagnosis: Normal sinus rhythm.

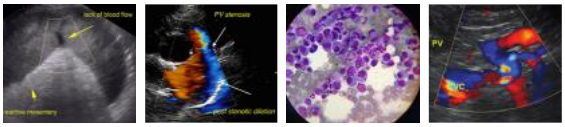
ECHOCARDIOGRAM FINDINGS
2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is mild to moderately hypertrophied. There is a mildly hyperechoic endocardium consistent with fibrosis. Mild papillary muscle hypertrophy. The right ventricle is normal. There is mild left atrial enlargement present. No right atrial enlargement present. Normal RVOT velocity. Abnormal anterior motion of the mitral valve is present, with the tip visible in the LVOT during systole. Elevated LVOT velocity is seen on color-flow imaging (not captured on Doppler). The anterior leaflet of the MV is mildly elongated and thickened, consistent with dysplasia. There is mild to moderate eccentric mitral regurgitation present. Normal velocity. No TR. No other obvious valvular regurgitation is present. No obvious intra or extracardiac shunts seen. There is no pericardial effusion noted. No pleural effusion appreciated.

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	5.0	180	0.73	1.3	0.63	50	92
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	1.5	1.5	1.4		1.8	0.96	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 diagnosis and cause of the murmur is mitral valve dysplasia leading to mild LV hypertrophy, mild MR and an obstructive LVOT flow pattern. A primary HOCM component cannot be ruled out as a concurrent issue; however, this is less likely given the young age of the patient. Regardless, there is mild left atrial dilation present, indicating the risk of spontaneous CHF and/or a thrombotic event is currently low. The ECG is unremarkable with a normal sinus rhythm.



PATIENT
Mochi Chapman

SPECIES
Feline

BREED
DSH

SEX
Female Spayed

AGE
2 years

WEIGHT
11.1lbs

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

IMAGING PERFORMED BY
Jenna Walsh, CVT

HOSPITAL NAME
West Eugene Animal Hospital

REFERRING VET
Dr. Bruce

INVOICE
32463

DATE
8/21/23

While no medications have been shown to definitively alter long term outcome at this stage of disease, atenolol is often initiated to decrease the outflow obstruction. In cases of solely primary MV dysplasia this can lead to improvement in the degree of obstruction and hypertrophy. Given these findings it is reasonable to initiate at this time as below. If the patient is difficult to medicate, serial monitoring would be an alternative approach.

Monitor at home for any respiratory signs or evidence of blood clot events (neurologic change, paralysis, etc.).

Anesthetic risk is considered mild, however judicious IV fluid rates are advised to avoid fluid overload. Additionally, drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid vasodilators as this may worsen the obstruction. A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction, and isoflurane maintenance. Additionally, steroids should be used with caution on older cats, as even a 'normal' geriatric heart can develop evidence of intolerance and fluid retention.

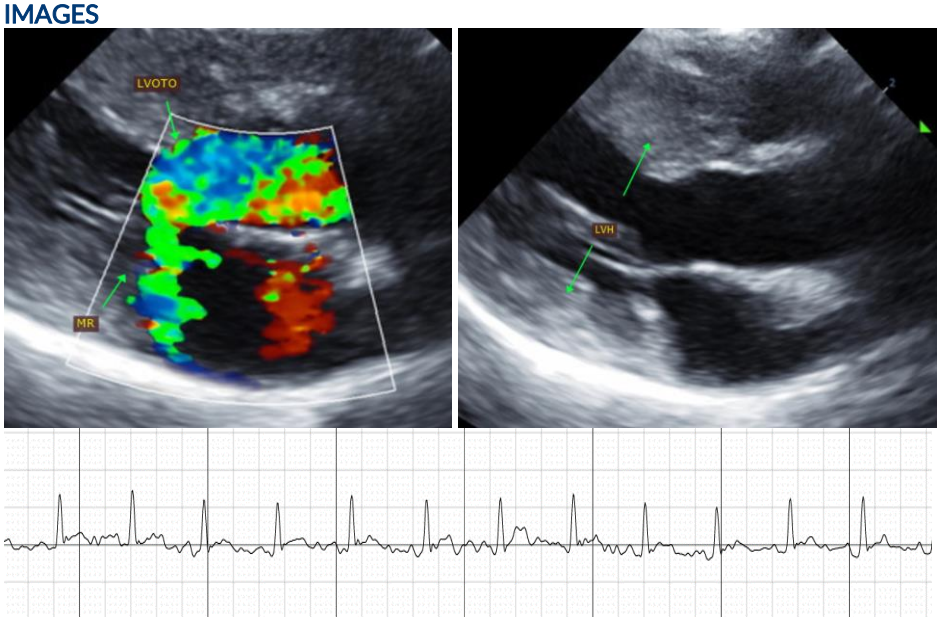
Long term prognosis is guarded given the age of the patient and highly variable nature of asymptomatic feline heart disease. Many cats will remain asymptomatic until mid-life or beyond, while others develop CHF within the first years. Close monitoring for progression to LA dilation in the future will help determine long term prognosis.

PLAN

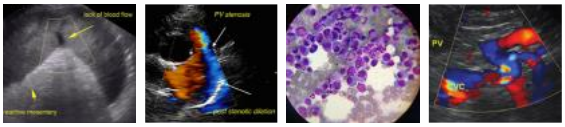
If elected, administer titrating dose of atenolol: 25mg tablets; Give ¼ tab once daily. Recheck heart rate in 1-2 weeks with target stressed rate of 140-160bpm 12-24 hours post-administration. Increase as needed until target reached. Screening blood pressure is recommended if possible.

Recommend recheck echocardiogram in 6 months to assess for progression and response to therapy, sooner if clinical issues arise.

IMAGES



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



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

PATIENT
Mochi Chapman

SPECIES
Feline

BREED
DSH

SEX
Female Spayed

AGE
2 years

WEIGHT
11.1lbs

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

IMAGING PERFORMED BY
Jenna Walsh, CVT

HOSPITAL NAME
West Eugene Animal Hospital

REFERRING VET
Dr. Bruce

INVOICE
32463

DATE
8/21/23

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