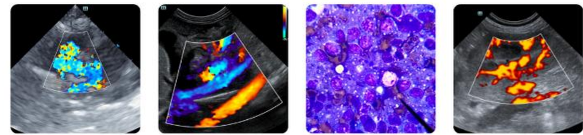
The Focal Zone
FUELED BY SONOPATH VETERINARY ULTRASOUND

SonoPath
FOSTERING THE ART OF VETERINARY MEDICINE™
www.thefocalzone.com
info@thefocalzone.com
298.808.2608



Clinical Sonography & Telecytology
Educational Teleconsultation Services™

PATIENT
Parvati Crawford

SPECIES
Feline

BREED
DMH

SEX
Female Intact

AGE
8 months

WEIGHT
6.2lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Crystal Hill, RVT

HOSPITAL NAME
Millen Road Animal Hospital

REFERRING VET
Dr. Karmur

INVOICE
45737

DATE
11/13/25

PRESENTING CLINICAL SIGNS

History: Adopted as a kitten through a rescue. At 8wk exam noted grade 3-4/6 heart murmur. At 16wk visit heart murmur was grade 5-6/6. Recently seen at ER for very heavy breathing, while in exam room she fell over and went into respiratory distress. Was given Furosemide and CXR suggestive of cardiomegaly and suspected CHF. Has continued on Furosemide PO TID.

ECHOCARDIOGRAM FINDINGS

2D, m-mode and color flow imaging is available. The left ventricular wall is mildly hypertrophied for this body size. There is a mildly hyperechoic endocardium consistent with fibrosis and ventricular remodeling. Mild papillary muscle hypertrophy. The right ventricle is subjectively normal in size and morphology. There is no left atrial enlargement present. No right atrial enlargement present. Abnormal anterior motion of the mitral valve is present. The anterior leaflet of the MV is elongated and thickened, consistent with dysplasia. There is some degree of mitral regurgitation present. The LVOT velocity is elevated on color flow imaging (not captured on spectral doppler). Normal RVOT velocity. There is no pericardial or pleural effusion appreciated. No obvious cardiac tumors.

CARDIAC CHART

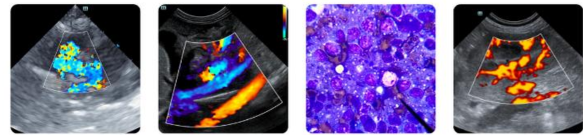
FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) (Moise, Pipers)	LVIDd (cm) (Moise, Pipers)	LVWd (cm) (Moise, Pipers)	FS (%)	EF (%)
NORMAL PARAMETER	------	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	2.8	210	0.63	1.0	0.63	60	90
FELINE CARDIAC PARAMETERS	**LA/AO** (Boon)	**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	1.3	1.3		NM	1.0	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 presumptive diagnosis and cause of the murmur is mitral valve dysplasia leading to LV hypertrophy and an obstructive LVOT flow pattern. A primary hypertrophic component also contributing cannot be ruled out prior to assessing response to therapy; however, this is less likely in a <1yo patient. Subaortic stenosis is also possible, given the appearance of the LVOT; however, visualization is limited. Regardless, there is no left atrial dilation, indicating the risk of spontaneous CHF and/or a thrombotic event is currently low. No additional issues are identified.

Even with structural disease seen here, CHF is considered unlikely in the absence of left atrial enlargement. Highly recommend a Radiologist review of the films, as Lasix is likely unnecessary. That being said, the outflow tract obstruction does appear significant, and it is certainly possible that a stress-induced syncopal episode may have occurred. Atenolol is recommended as below, in



PATIENT
Parvati Crawford

SPECIES
Feline

BREED
DMH

SEX
Female Intact

AGE
8 months

WEIGHT
6.2lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Crystal Hill, RVT

HOSPITAL NAME
Millen Road Animal Hospital

REFERRING VET
Dr. Karmur

INVOICE
45737

DATE
11/13/25

hopes of relieving this phenomenon in the future. No additional medications are necessary at this time.

These findings are somewhat unusual and do appear significant. **Consider referral in this complicated case.**

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

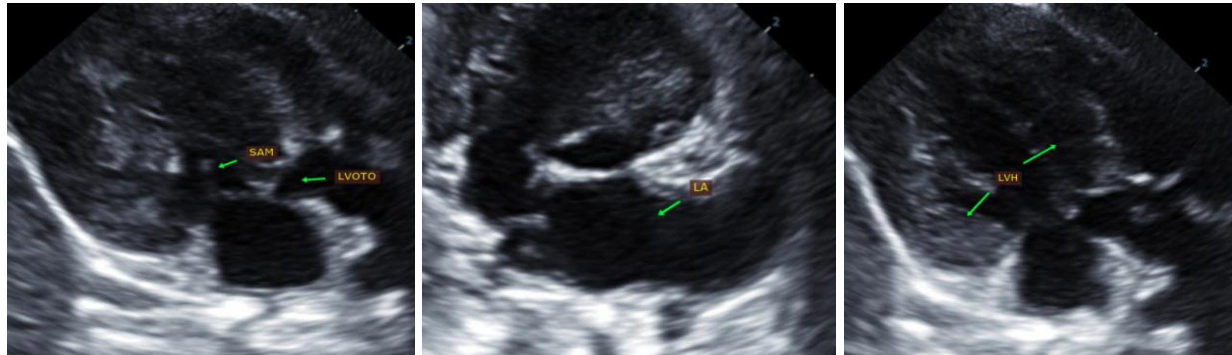
Anesthetic risk is considered mild, however judicious IV fluid rates are advised to avoid fluid overload. Additionally, drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid vasodilators as this may worsen the obstruction. A reasonable protocol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

PLAN

Institute 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. A CXR review by a Radiologist is recommended, if CHF is confirmed, Lasix may be necessary at least for the short term. Otherwise, this medication can be weaned and discontinued.

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