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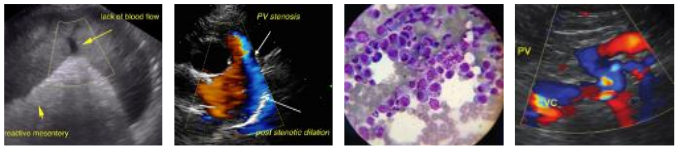

PATIENT
Storm Czaplewski

SPECIES
Feline

BREED
DLH

SEX
Male

AGE
4 months 3 weeks

WEIGHT
6.7lbs

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

IMAGING PERFORMED BY
K. Kicker, DVM

HOSPITAL NAME
Wauwatosa Veterinary Clinic

REFERRING VET
Dr. Oakes

INVOICE
28602

DATE
1/27/23

PRESENTING CLINICAL SIGNS
History: Grade 3/6 heart murmur. Asymptomatic, Assess prior to anesthesia for neuter.

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only.
Mild cardiomegaly. No obvious evidence of CHF.

ECHOCARDIOGRAM FINDINGS
2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is mildly increased for this body size. Papillary muscles normal. The right ventricle is normal. There is minimal left atrial enlargement present. No right atrial enlargement present. The MV is mildly thickened with abnormal anterior motion suspected on 2D imaging (not captured on Spectral doppler). No obvious mitral regurgitation on color flow imaging; however, spectral doppler is suggestive. No TR. No other obvious valvular regurgitation is present. No obvious intra or extra-cardiac shunts are visualized. 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	3.0	190	0.53	1.24	0.53	58	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	1.4	1.1		1.4	1.1	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 an obstructive LVOT flow pattern and secondary MR. These findings are considered speculative as the images are not definitive. Mild LV hypertrophy and minimal left atrial enlargement are noted, which are concerning in a 4 month old cat. No additional issues are identified. It is important to note that small abnormalities are easily missed in juvenile kittens and referral should be considered in any congenital case.

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 the young age of the cat, I would initiate this medication at this time; however, close follow up is advised as this may become warranted. In the interim, monitor at home for any respiratory signs or evidence of blood clot events (neurologic change, paralysis, etc.).

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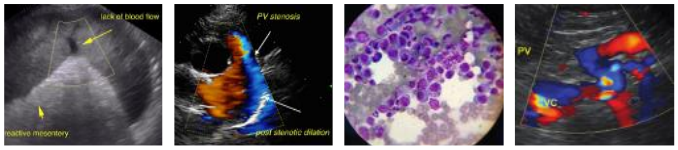

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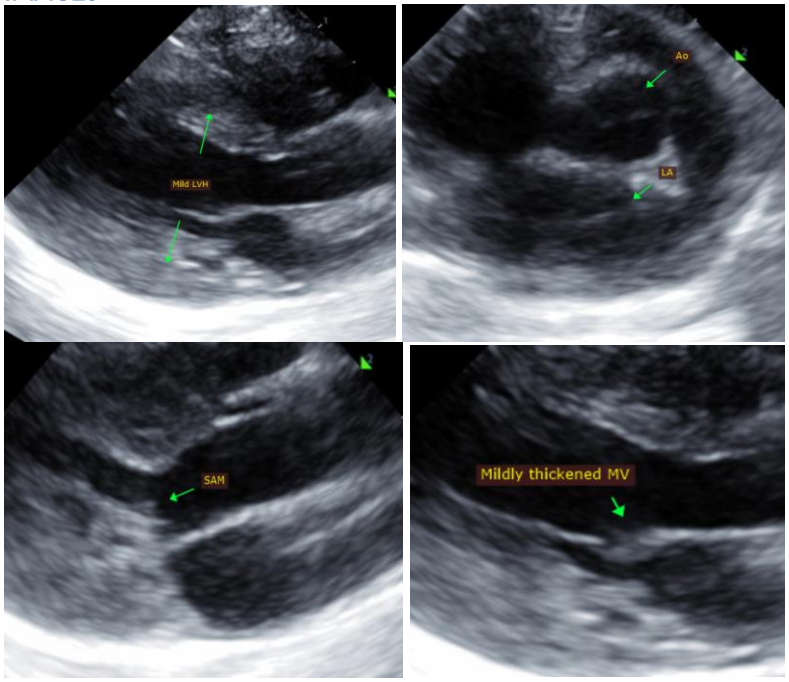
These findings do not pose a significant risk for general anesthesia. Judicious IV fluid rates are advised to avoid fluid overload. Additionally, drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid vasodilators as this may worsen the obstruction. A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction, isoflurane maintenance.

PLAN

Consider referral in any congenital case. If declined, recommend recheck echocardiogram in 4 months to reassess murmur origin and determine if Atenolol is warranted.

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