



PATIENT

Casper Terell

SPECIES

Feline

BREED

DLH

SEX

Male

AGE

12 weeks

WEIGHT

4.3lbs

INTERPRETED BY

Maggie Machen
Lamy, DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Melissa Weisman,
DVM

HOSPITAL NAME

Minnesota Veterinary
Ultrasound

REFERRING VET

Dr. Weisman

INVOICE

21777

DATE

10/29/21

PRESENTING CLINICAL SIGNS

History: PE revealed brown discolored deciduous teeth, marked swelling of both prescapular lymph nodes (right worse than left) R: 1cm bilobed, L: 0.5cm, and a grade 6/6 sternal systolic murmur.
-Current Medications: Biomox - 0.5ml PO BID (12.7mg/kg BID).
-Sedation: 0.8mg butorphanol IV for this exam.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Normal mitral valve leaflets with no obvious prolapse into the left atrial lumen. No mitral regurgitation. Normal left atrial dimension. Normal LV diameter with adequate myocardial function. The LV wall is normal. The tricuspid valve appears normal in form however with no obvious tricuspid regurgitation present. No significant right atrial enlargement. Mild right ventricular dilation and hypertrophy indicative of suspect pressure overload. Mild elevation of pulmonic outflow velocities. The PV leaflets are unable to be clearly visualized; however, the stenosis appears proximal; rule out DCRV versus subvalvular/infundibular stenosis. Dilation of the main pulmonary artery and peripheral branches. No obvious pulmonic insufficiency. The aortic valve appears to have normal morphology and mobility. Trace aortic insufficiency. No pericardial or pleural effusion noted. No obvious intra or extra-cardiac shunts.

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	1.96	NM	0.32	1.2	0.32	50	94
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	1.0	0.9		0.7	3.1	NM
<p><i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i> 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.</p>							

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is elevated flow velocity through the RVOT/proximal pulmonary artery. There are changes indicative of early right heart pressure overload with MPA/branch dilation. The RV appears mildly thickened which would support this as well. A stenosis is suspected, likely proximal to the pulmonic valve. Rules out would include a double chamber right ventricle (DCRV) versus a subvalvular/infundibular stenosis. Either is uncommon and further evaluation is recommended. No other congenital abnormalities were visualized; however, small shunts or defects can be difficult to identify particularly in a <2kg kitten. Referral to a Cardiologist is recommended, if possible, for advanced imaging in this complicated case to confirm the diagnosis and stratify risk for complication.



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Prior to a definitive diagnosis, no medications are indicated, and prognosis is guarded at this time. Even if a stenosis is confirmed, the degree of obstruction appears relatively mild at this time and doesn't warrant immediate therapy. If referral is declined, it is reasonable to reassess this defect in 6 months before considering initiating lifelong heart rate control.

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If needed, anesthetic risk is considered mild, however judicious IV fluid rates are advised avoid fluid overload. Pre-oxygenate for 5 minutes prior to induction. A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction, isoflurane maintenance. Drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Monitor heart rate, BP, ECG carefully and intervene as necessary.

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Monitor for development of associated clinical signs (collapse, abdominal distention, cough, labored breathing). Mild exercise restriction is advised.

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12 weeks

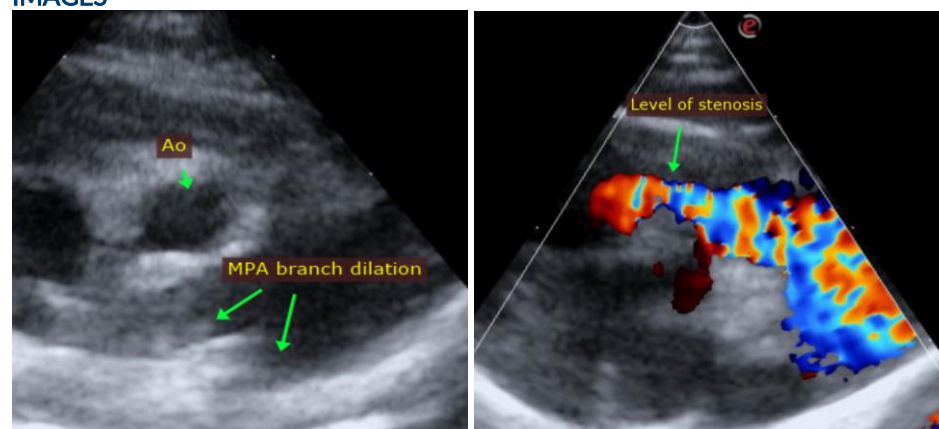
PLAN

Recommend referral as discussed. If declined, recheck echocardiogram in 6 months to screen for progression and need for rate control.

WEIGHT

4.3lbs

IMAGES



INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Melissa Weisman, DVM

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.

HOSPITAL NAME

Minnesota Veterinary
Ultrasound

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.

REFERRING VET

Dr. Weisman

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

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