



PATIENT

Lucky Boy 22-09-75
Animal Rescue

SPECIES

Feline

BREED

DLH

SEX

Male

AGE

6 months

WEIGHT

8.4lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Mark van Campen,
DVM

HOSPITAL NAME

Mississippi Mills
Animal Hospital

REFERRING VET

Dr. van Campen

INVOICE

27844

DATE

12/6/22

PRESENTING CLINICAL SIGNS

History: Grade 5/6 heart murmur. Asymptomatic. Assess prior to anesthesia.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal in dimension. The LV chamber is normal in diastole. A moderate diameter perimembranous VSD is seen just below the aortic valve. The shunt is left to right with a max velocity of (5.5m/s). No obvious right to left flow identified. The left atrium is mildly increased in size. The right atrium is normal in size. The right ventricle appears normal. The MPA is normal. The mitral valve is normal in structure and mobility. No MR. Blood flow through the LVOT is normal in velocity. Blood flow through the PV is normal in velocity. No PI. There is no pleural or pericardial effusion seen.

CARDIAC CHART

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) (Moise, Pipers)	LVIDd (cm) (Moise, Pipers)	LWVd (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	3.8	NM	0.48	1.43	0.46	58	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	NM	1.3	1.1		1.5	1.5	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 a perimembranous ventricular septal defect (VSD). The defect is moderate in dimension, with left to right flow. There is evidence of mild left heart volume overload, which while mild is concerning in a 6-month-old cat. No obvious additional congenital defects are visualized.

VSDs in cats have variable outcomes, and lifelong monitoring is advised. The defect in this case appears hemodynamically significant, leading to increased concern for volume overload over time and potentially progression to clinical signs and development of CHF within the patient's lifespan. The prognosis is guarded however, as the rate of progression with subclinical cardiomyopathy is highly variable. Patient will always remain at risk for development of congestive signs, arrhythmias and/or sudden death in the future.

With only mild changes seen here, no medications are indicated. Follow up is certainly advised.



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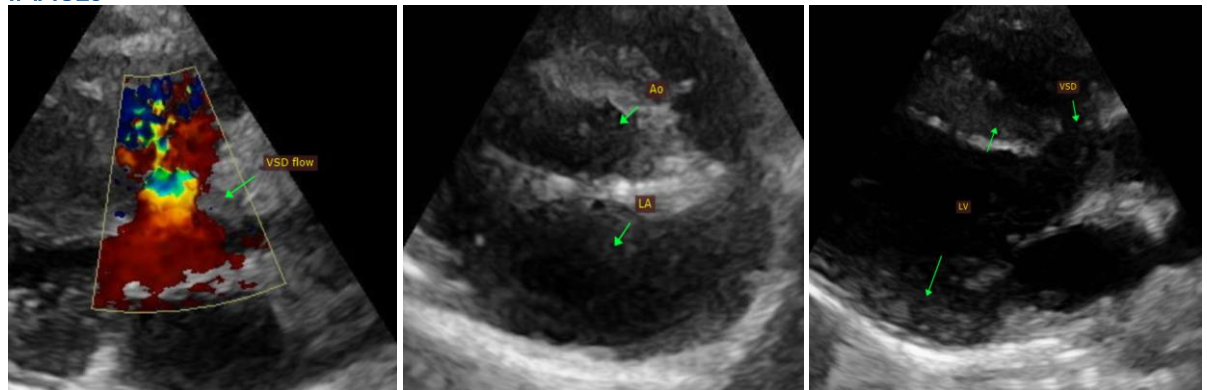
Anesthetic risk is considered mild at this time, however judicious IV fluid rates are advised to avoid fluid overload. Additionally, drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). **A screening ECG is recommended prior to procedure however, as interventricular conduction abnormalities can be seen with septal defects.** A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction, isoflurane maintenance.

Monitor at home for any associated clinical signs, including respiratory changes or signs of a thrombus.

PLAN

Recommend a recheck echocardiogram in 1 year to assess progression, sooner if clinical signs 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

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