
PATIENT

Hondo Beimers

PRESENTING CLINICAL SIGNS

History: Heart murmur found at initial exam. Grade V/VI systolic murmur. Thriving kitten - no clinical signs.

SPECIES

Feline

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal in dimension. The LV chamber is mildly increased in diastole. A small diameter perimembranous VSD is seen just below the aortic valve. The shunt is left to right, the max velocity is 5.6m/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 mildly dilated. The mitral valve is normal in structure and mobility. Trace MR. Blood flow through the LVOT and RVOT is normal in velocity. No PI. There is no pleural or pericardial effusion seen.

BREED

DLH

SEX

Male

CARDIAC CHART
AGE

4 months

WEIGHT

5.3lbs

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

26025

DATE

8/25/22

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) <small>(Moise, Pipers)</small>	LVIDd (cm) <small>(Moise, Pipers)</small>	LWVd (cm) <small>(Moise, Pipers)</small>	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	2.42	NM	0.37	1.3	0.39	50	92
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Swe) <small>(Abbott)</small>	LA 2D short axis Base view (cm) <small>(Abbott)</small>		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	1.5	0.95		1.1	0.96	NM

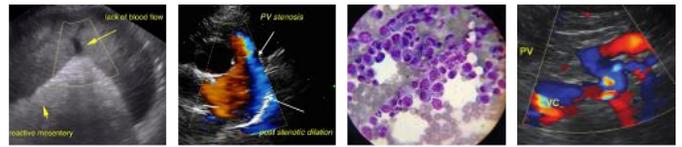
**Note: All measurements based upon multi-modal images and methods. An average value is reported.
 Adapted from June Boon, Veterinary Echocardiography, 1998
 Abbott J & MacLean H JVIM 2006;20: 111-119, Moise et al. Am J Vet Res 47:1476, 1986. Pipers et al. Am J Vet Res 40:882, 1979.*

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is a perimembranous ventricular septal defect (VSD). The defect is small in dimension, with left to right flow. There is evidence of mild left heart volume overload, which while mild is concerning in a four-month-old cat. The MPA is mildly dilated, supporting mild volume overload/relative PS. No 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 heart enlargement, no medications is warranted at this time. Follow up lifelong is advised as this may change going forward.



PATIENT

Hondo Beimers

SPECIES

Feline

BREED

DLH

SEX

Male

AGE

4 months

WEIGHT

5.3lbs

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.

Recommend a recheck echocardiogram in 6-12 months.

IMAGES



INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

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.

IMAGING PERFORMED BY

Mark van Campen,
DVM

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

HOSPITAL NAME

Mississippi Mills
Animal Hospital

REFERRING VET

Dr. van Campen

INVOICE

26025

DATE

8/25/22