



PATIENT

Silvia Gilbert

SPECIES

Feline

BREED

DSH

SEX

Intact Female

AGE

8 Months

WEIGHT

6 Pounds

INTERPRETED BY

Tam Mengine DVM,
DABVP (Canine/Feline
Practice)

IMAGING PERFORMED BY

Dr. Karen Ebersole DVM,
DABVP (Canine and
Feline)

HOSPITAL NAME

Scanvet

REFERRING VET

Dr. Friel

INVOICE

35214

DATE

1/3/26

PRESENTING CLINICAL SIGNS.

History: Loud heart murmur with thrill noted at pre-OVH exam. Gabapentin and Butorphanol IM for sedation.

Abnormal PE/Chem/CBC/UA Results: PE: Grade 4-5/6 right parasternal systolic heart murmur with palpable thrill. Felv/FIV - Neg.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT	2.7	202	0.4	1.9	0.3	56	89
FELINE CARDIAC PARAMETERS	LA/AO (m-mode long axis)	LA/AO HEART BASE (Sisson)	LAD LA MAX 4 Chamber		LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)
NORMAL PARAMETER	<1.5	1.6	0.7-1.7		<1.6	<1.3	40-60
PATIENT	1.5	1.8	2.1		1.4	1.5	NM
Adapted from June Boon, Veterinary Echocardiography, 1998 Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705							

The **left atrium** is moderately dilated with evidence of spontaneous echocardiographic contrast, but no visible thrombus formation. Left atrial systolic function appears decreased. The **left ventricle** exhibits mild eccentric hypertrophy, with normal free wall thickness, and demonstrates good systolic function. Ventricular septum diastolic wall measurements are within normal limits. The **right atrium** is subjectively of normal size and **right ventricle** dimensions and systolic function are subjectively normal. There is turbulent blood flow noted in the region of the perimembranous ventricular septum, with predominantly left-to-right flow observed. There is a potential defect seen in the region of the AV canal, but this may represent echo drop-out artefact. The **mitral, tricuspid, aortic and pulmonary valves** all exhibit normal appearance and function, and no vegetative lesions were seen. The **main pulmonary artery and its branches** appear subjectively dilated, however there is no other evidence of pulmonary hypertension at this time. Flow velocity across the pulmonic valve is mildly elevated, consistent with relative pulmonic stenosis. There is no evidence of pericardial or pleural effusion, and no masses are seen.

ULTRASONOGRAPHIC FINDINGS

- Left-to right ventricular shunting defect with evidence of hemodynamic significance



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The echocardiographic findings are consistent with a left-to-right ventricular septal defect, though a less common defect such as a partial atrioventricular septal defect is also possible. Evaluation by a board-certified cardiologist should be considered for definitive diagnosis but would be unlikely to change underlying patient management.

The patient's long-term prognosis is guarded, as this defect puts the patient at risk for left-sided congestive heart failure, thromboembolic disease, and potentially sudden death should a secondary arrhythmia develop. There is also a risk of the shunt reversing, due to secondary pulmonary hypertension, which in turn would put the patient at risk for right-sided congestive heart failure. The client should be advised to monitor the sleeping respiratory rate, as this may be an early indicator of progression to congestive heart failure. Clopidogrel at 18.75 mg total dose, orally once daily would be recommended, but should be delayed until after the patient has recovered from the pending surgical procedure. Recheck echocardiogram would be recommended in 6-12 months, to determine whether the condition has progressed, and whether further medical intervention would be indicated.

This patient has a moderate risk of significant complications with general anesthesia. They are at risk for fluid overload, but also at risk for right to left shunting should they become hypotensive. The following recommendations for anesthesia are suggested:

- Consider utilizing a facility with a board-certified anesthesiologist on staff
- Avoid drugs that may cause significant vasodilation, such as acepromazine
- Pre-medicate with an opiate, and if needed a benzodiazepine. Oral gabapentin 2 hours prior to the procedure can also help lessen anesthetic needs.
- Induction with propofol or alfaxalone would be recommended over other induction protocols. The patient should be pre-oxygenated with flow-by O₂ for 1-2 minutes prior to induction.
- Maintenance anesthesia on isoflurane or sevoflurane.
- Local blocks would be recommended whenever possible, to reduce inhalant anesthetic requirements.
- IV fluids should be used at modest doses, starting at 1-2ml/kg/hr.
- Continuous monitoring of ECG, pulse ox, capnography and blood pressure is recommended.
- Perioperative antibiotics should be considered, as humans with VSDs have an increased risk of developing endocarditis, though this has not been definitively demonstrated in cats.



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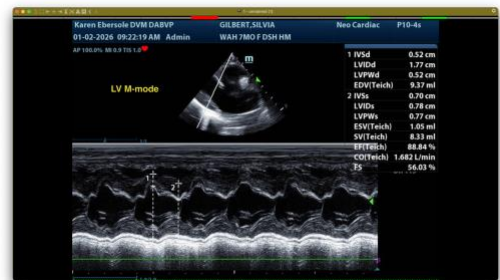
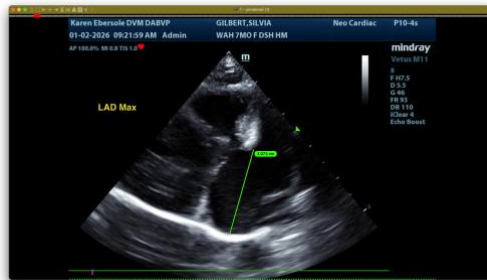
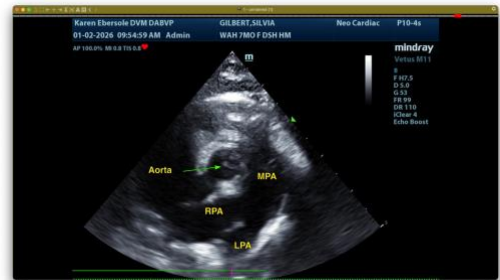
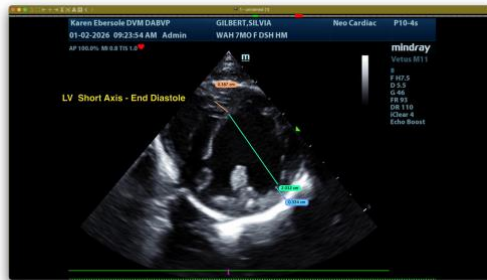
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

Tam Mengine, DVM, DABVP (canine/feline practice)

info@SonoPath.com