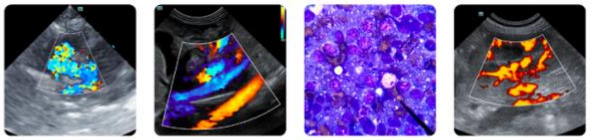

PATIENT

Koa Duarte

SPECIES

Feline

BREED

Sphinx

SEX

Neutered Male

AGE

3 Years

WEIGHT

9.02 Pounds

INTERPRETED BY

James Wood, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY

Dr. Sang Han

HOSPITAL NAME

Oso Pet Care Center

REFERRING VET

Dr. Sang Han

INVOICE

37278

DATE

6/1/26

PRESENTING CLINICAL SIGNS

History: Vomiting and inappetence r/o dietary indiscretion vs. pancreatitis vs. other underlying disease Heart murmur r/o physiologic vs. dehydration vs. structural heart disease (e.g., hypertrophic cardiomyopathy).

Abnormal PE/Chem/CBC/UA Results: Cardiovascular: Normal rate and rhythm, heart murmur noted, grade 3 parasternal murmur. Heart murmur r/o physiologic vs. dehydration vs. structural heart disease (e.g., hypertrophic cardiomyopathy) BNP: Abnormal results 6/1/26 FPL: Normal.

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	4.1	145	0.74	1.7	0.4	35.29	--
FELINE CARDIAC PARAMETERS	**LA/AO** (M-mode)	**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	2.1	2.1	1.7		1.53	1.34	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							

Radiographic Interpretation

Three view thoracic radiographs are available for review. There is mild generalized cardiomegaly on all provided views. The visible pulmonary vasculature is within normal limits. The pulmonary parenchyma is normal with no evidence of cardiogenic pulmonary edema or pleural effusion.

Cardiac Presentation

The mitral valve leaflets are normal and there is mild to moderate eccentric mitral regurgitation. There is no prolapse of the mitral valve leaflets. The left atrial size is within normal limits. Left ventricular systolic function appears preserved. Left ventricular diastolic dimensions are within normal limits. There is systolic anterior motion of the mitral valve resulting in a mild dynamic LVOT obstruction and mild to moderate eccentric mitral valve insufficiency. There is evidence of a contact lesion in the interventricular septum at the level of SAM. There is severe asymmetric left ventricular hypertrophy with severe thickening of the interventricular septum and a normal LV free wall thickness. The left ventricular myocardium in the septum is also hyperechoic. There is normal right atrial size without

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evidence of tricuspid regurgitation. There is no prolapse of the tricuspid valve leaflets and no evidence of pulmonary hypertension on the images provided. The right ventricle appears normal in structure and function subjectively. The aortic and pulmonary valves have normal morphology, and the corresponding outflow velocities are within normal limits. There is no evidence of pulmonary or aortic insufficiency. The aorta appears normal. The pulmonary artery and associated branches appear normal. There is no evidence of pleural effusion, pericardial effusion, or intracardiac masses.

ULTRASONOGRAPHIC FINDINGS

- Hypertrophic obstructive cardiomyopathy – ACVIM stage B2
- Dynamic LVOTO – SAM (mild LVOT obstruction)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The echocardiogram revealed thickening of the left ventricular walls. This is consistent with a hypertrophic cardiomyopathy phenotype, or HCM. In HCM, there is hypertrophy (thickening) of the muscle fibers that make up the walls of the heart. Many cases are a primary heart muscle disease (genetic in origin), however in some cases this can be a secondary process that may improve with treatment of the underlying condition (i.e. high blood pressure or hyperthyroidism among others). A blood pressure and total T4 are recommended in cats >6yr to rule these out as underlying causes (if not already performed). Regardless of the cause, the thickening causes diastolic dysfunction, and progressive left atrial enlargement. Eventually, cats with left atrial enlargement are at risk of developing congestive heart failure (pulmonary edema, pleural effusion, or both), blood clot formation and arrhythmias/sudden death. Some cats with mild HCM may live a normal lifespan with no further progression of disease. However, it is also possible that his HCM will progress over time and further therapy may be required for congestive heart failure, blood clots, or arrhythmias.

The echocardiogram showed HCM with left atrial enlargement. Clopidogrel is recommended (18.75 mg PO once daily) to reduce the risk of clot formation. A recheck echocardiogram +/- thoracic radiographs are recommended in 6 months to determine if there is any progression.

There was also evidence of a dynamic left ventricular outflow tract obstruction due to systolic anterior motion of the mitral valve. While beta blockers have been used to improve the LVOT obstruction, studies have not demonstrated a benefit in survival times or other outcomes with beta blockers (even in cats with a severe obstruction on echo). Some cats who have symptoms of exercise intolerance (these cats typically have severe LVOTO) may have an improvement in clinical signs with atenolol therapy.

If ongoing IV fluid therapy is necessary for the ongoing GI signs and inappetence. There is a moderate to severe risk of precipitating congestive heart failure. This can be pursued if medically necessary, but a close monitoring of the sleeping breathing rate is recommended, along with the body weight. Repeat thoracic radiographs immediately if there is any trend upward in respiratory rate or unexplained rise in body weight.

Monitoring

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It is very important to catch any clinical signs concerning for emerging CHF as early as possible. The client should be closely monitoring and ideally tracking the sleeping respiratory rate. The sleeping RR should be between 10-30 breaths per minute or less (ideally in the teens or low 20s). **If the resting RR is trending upward**, consistently>35/min while resting/sleeping, the patient should be seen urgent for evaluation to determine if CHF is developing. If your pet is ever unable to use one or more of their limbs, seek emergency veterinary attention. *RECHECK ASAP for thoracic radiographs if there is increase in RR to detect early CHF and avoid ER presentation**

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.

James Wood, DVM, DACVIM (Cardiology)

info@SonoPath.com