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ECHOCARDIOGRAM REPORT

Date: 8/22/23	Weight: 2.7 kg
Patient: Nala	Referring Veterinarian: Dr.
Signalment: 3y FS DSH, Feline	Hospital:

History: The owner has been noticing that Nala does not engage in playing, is more quiet, and gets very worked up after minimal exercise. Grade V/VI heart murmur was heard loudly in all quadrants.

Medications: None

Echocardiogram findings:

Left Ventricle: There is normal chamber size in diastole and systole. Hyperdynamic systolic function. Mild to moderate asymmetric concentric hypertrophy of the IVS and LVFW.

Left Atrium: The left atrium is mildly enlarged.

Right Ventricle: The right ventricle is subjectively normal in size.

Right Atrium: The right atrium is normal in size.

Aortic Valve: The aortic valve is trileaflet, and appears structurally normal, with turbulent flow across the valve in systole and mildly increased flow velocity.

Mitral Valve: The mitral valve appears normal in structure with mild insufficiency noted. There is mild systolic anterior motion of the mitral valve.

Tricuspid Valve: The tricuspid valve appears normal in structure with trace insufficiency. No pulmonary hypertension.

Pulmonic Valve: Pulmonic valve appears structurally normal with normal flow across the valve in systole and no insufficiency.

Pulmonary Artery: The main pulmonary artery is normal in size in relation to the Aorta.

Aorta: Ascending aorta is of normal caliber.

Pericardium: There is no pericardial effusion noted.

Trace pleural effusion and lung consolidation. No cardiac masses or blood clots were seen.

No visible heartworms were seen in the pulmonary artery or right atrium.

ECG: The predominant underlying rhythm is regular and consistent with sinus tachycardia. No ventricular arrhythmia was noted.

Echocardiogram measurements:

LVIDD (mm) - 14.9 LVIDS (mm) - 5.4 IVSd (2D mm) - 7.9 LVPWd (2D mm) - 5.7 FS% - 64 LA (cm) - 1.47 LA/AO - 2.05 AV Vmax: 2.03 m/s PV Vmax: 0.59 m/s MV E Vel: 0.67 m/s MR Vmax: 4.91 m/s MR max PG: 96.43 mmHg

Clinical Diagnosis:

1. Asymmetric mild to moderate concentric hypertrophy of the LV wall and IVS - HCM considered most likely. Other differentials include uncontrolled hyperthyroidism and chronic systemic hypertension, less likely myocardial infiltrative disease.

- 2. Turbulent flow at the left ventricular outflow tract and mild increased flow velocity.
- 3. Systolic anterior motion of the mitral valve. Mild left atrial enlargement.
- 4. Trace Tricuspid valve regurgitation with no pulmonary hypertension.

Conclusions:

Based on Nala's echocardiogram today there is asymmetric hypertrophy of the interventricular septum and left ventricle-free wall with systolic anterior motion of the mitral valve, and turbulent flow at the left ventricular outflow tract. The most likely diagnosis is Hypertrophic Obstructive Cardiomyopathy (HOCM). Other differentials for concentric hypertrophy include uncontrolled hyperthyroidism with thyrotoxic cardiomyopathy and chronic systemic hypertension. Recommend assessing both T4 and systemic blood pressure with a Doppler machine if not already done. Chest radiographs showed cardiomegaly and no evidence of pulmonary edema.

Treatment recommendations:

Pimobendan is not recommended based on the presence of LVOT obstruction. Many cats with HCM and heart failure often have left ventricular outflow tract obstruction (LVOT), and as a positive inotropic agent, pimobendan could potentially worsen this obstruction. <u>Atenolol 25 mg 1/4 tablet PO SID, Enalapril 0.25 mg/kg PO SID, and Clopidogrel 75 mg 1/4 tablet SID are recommended based on current echocardiogram.</u>

Preventatives: Year-round heartworm prevention is recommended for both dogs and cats in Florida.

Exercise: Exercise is good for heart patients as long as it is tolerated well with no signs of heavy breathing or excess lethargy afterward. Allow the patient to limit their activity. If tired, do not push them further.

Anesthesia: General anesthesia is not recommended at this time. Further directions will be provided pending the patient's response to therapy.

Sedation for cats with HCM/HOCM. The ideal sedation, and the one that we use most commonly at Central Florida Veterinary Cardiology is Gabapentin. It can be used when clients are taking cats to the veterinary hospital; 50 to 100 mg PO administered 2 to 3 hours beforehand will produce mild to heavy sedation.

Gabapentin produces no known cardiovascular effects, direct or indirect, in cats. For some cats, we sometimes give a dose the night before the appointment, and again 2 to 3 hours before the appointment. Trazodone at 4 mg/kg PO is an alternative drug. Normally used 45 minutes before the exam. We have better results with Gabapentin in cats, and Trazodone in dogs (same dose).

Monitor closely for the development of symptoms such as loss of appetite, vomiting, diarrhea, weakness, decreased activity level or collapse, and increased respiratory rate (normal respiratory rate is less than 40 breaths per minute, advise to call if greater than 40, or greater than 20% increase), difficulty breathing, coughing or abdominal distention.

Follow Up:

Recommended in 3 months.

Collaboration with a cardiologist is recommended. Research studies showed that collaborative care by a Cardiologist with the Primary Care Veterinarian resulted in increased survival in pets with heart disease. (J Am Vet Med Assoc. 2016 Jul 1;249(1):72-6). Video appointments can be scheduled directly with Dr. Bolfer by having the client call (689) 249- 9281 or visit our website at www.cfvetcardiology.com to schedule an appointment for follow-up instructions.

Electronically signed by:

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Relevant images:



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