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Clinical Sonography & Telectology

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PATIENT

Flash Chapin

SPECIES

Feline

BREED

DSH

SEX

Male Neutered

AGE

13 years

WEIGHT

8.4lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Stephanie Pearce,
RDCS, RVT

HOSPITAL NAME

Prime Care Animal
Hospital

REFERRING VET

Dr. Martin

INVOICE

22305

DATE

12/6/21

PRESENTING CLINICAL SIGNS

History: Murmur. Hyperthyroid.

-Pertinent abnormal PE/Chem/CBC/UA Results: TT4: 19, FT4: >6.0.

-Sedation used: Not required for a full diagnostic ultrasound.

STAT: Not requested.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is moderate to severely thickened with regions of asymmetry. There is a diffusely hyperechoic endocardium consistent with fibrosis and ventricular remodeling. Mild papillary muscle hypertrophy and remodeling. The right ventricle is subjectively normal in size and morphology. There is moderate left atrial enlargement present. No right atrial enlargement present. Elevated RVOT velocity with a dynamic profile. There is significant systolic anterior motion (SAM) of the mitral valve present, with an elevated dynamic LVOT velocity. There is moderate eccentric mitral regurgitation present secondary to SAM. No other obvious valvular regurgitation is present. No pericardial or pleural effusion seen. No tumors appreciated.

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	3.5-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	3.8	270	0.9	1.6	0.71	50	85
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	1.6	1.8	3.0	3.3	NM	

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 diagnosis is hypertrophic obstructive cardiomyopathy. This indicates LV hypertrophy (moderate to severe in this case) with a dynamic LVOT obstruction (SAM) and secondary MR. The hypertrophy is significant and there is moderate left atrial enlargement, indicating the risk of spontaneous CHF and/or a thrombotic event is elevated. No additional issues are identified.

Given that this patient is an unregulated hyperthyroid case, these findings may reflect a combination of primary and secondary disease or may simply be secondary to tachycardia. Due to the degree of tachycardia, severity of left atrial enlargement and potential for CHF, consider low dose Lasix therapy until the thyroid is controlled. Atenolol is also recommended in this case until the thyroid is well controlled and the heart rate normalizes. A screening blood pressure is highly recommended once the patient is stabilized with monitoring as the thyroid is normalized. Prognosis is guarded due to the combination of issues.

Elective anesthesia is not advised until the patient is stabilized.

Monitor at home for any change in RR/RE, exercise intolerance, and/or signs of a blood clot going forward.

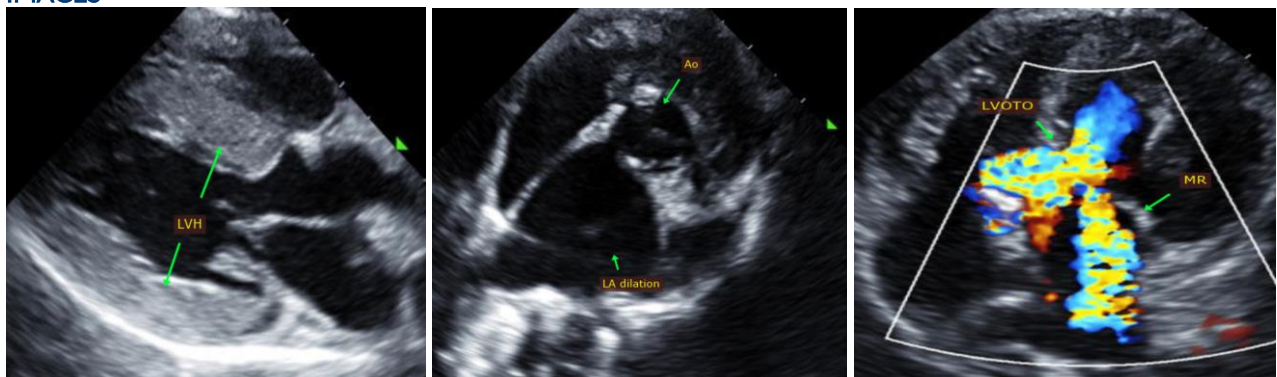
PLAN

Immediate institution of thyroid medication, either oral or topical. Consider low dose Lasix 1mg/kg PO q12h. Institute titrating dose of atenolol: 25mg tablets; Give ¼ tab once daily. Recheck heart rate in 1-2 weeks with target stressed rate of 140-160bpm 12-24 hours post-administration. Increase as needed until target reached.

Once thyroid is deemed well controlled, a brief screening of atrial dimension is recommended. If normalized, discontinue Lasix at that time. Additionally, wean atenolol and discontinue with careful monitoring of HR once discontinued.

Recommend recheck echocardiogram 6 months post-euthyroid status to assess for progression/regression.

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.

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