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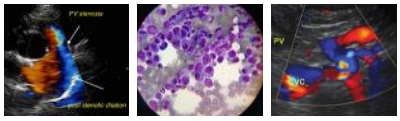

SonoPath
Clinical Sonography & Telecytology
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PATIENT
Brownie Boo Miles

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
10.10.10

WEIGHT
8.2lbs

INTERPRETED BY
Maggie Machen Lamy, DVM, DACVIM (Cardiology)

HOSPITAL NAME
Timonium Animal Hospital

REFERRING VET
Dr. Montessi

INVOICE
30036

DATE
4.4.23

PRESENTING CLINICAL SIGNS

History: Hyperthyroid (unregulated). Grade III/VI systolic murmur, Weight loss. Periodontal disease ¾.
-Pertinent abnormal PE/Chem/CBC/UA Results: T-4 3.9 (2/23) 11.5 (4/4 AFTER increasing methimazole to 7.5mg BID
-Current medications: Methimazole 7.5mg BID x 6 weeks (suspension)
-Blood pressure: 169mmHG
-Sedation used: Not required to complete full diagnostic ultrasound.
-Pertinent previous ultrasound results: No previous.
-STAT: Not requested
-Imaging performed by: Andi Parkinson, BS, RDMS.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is moderately hypertrophied. There is a diffusely hyperechoic endocardium consistent with fibrosis and ventricular remodeling. Papillary muscles are mildly hypertrophied. The right ventricle is subjectively normal in size and morphology. There is mild left atrial enlargement present. No right atrial enlargement present. Normal RVOT velocity. There is systolic anterior motion (SAM) of the mitral valve present, with a significantly elevated LVOT velocity (dynamic profile). There is mild eccentric mitral regurgitation present secondary to SAM. No other obvious valvular regurgitation is present. There is no pericardial effusion noted. No pleural effusion appreciated.

CARDIAC CHART

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) (Moise, Pipers)	LVIDd (cm) (Moise, Pipers)	LVWd (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	3.7	210	0.75	1.5	0.72	52	86
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	1.4	1.43		2.0	1.2	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 with a dynamic LVOT obstruction (SAM). There is mild left atrial dilation, indicating the risk of spontaneous CHF and/or a thrombotic event, while currently low, may be elevated in the future. In a patient that is notably uncontrolled hyperthyroid, certainly thyroid control is warranted, as this may be contributing to disease. A screening BP and T4 are recommended every 6 months. With control of the thyroid we may see some improvement in LV hypertrophy and follow up is advised.

While no medications have been shown to definitively alter long term outcome at this stage of disease, atenolol is often initiated to decrease the outflow obstruction (particularly in light of tachycardia). Given the degree of hypertrophy and mild LA dilation, recommend initiate at this time as below. As the thyroid becomes controlled, close monitoring of heart rate is recommended to ensure the rate does not drop too dramatically (target 140-160bpm). No additional medications are indicated.

Anesthetic risk is considered mild, 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). Avoid vasodilators as this may worsen the obstruction. A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction, and isoflurane maintenance.

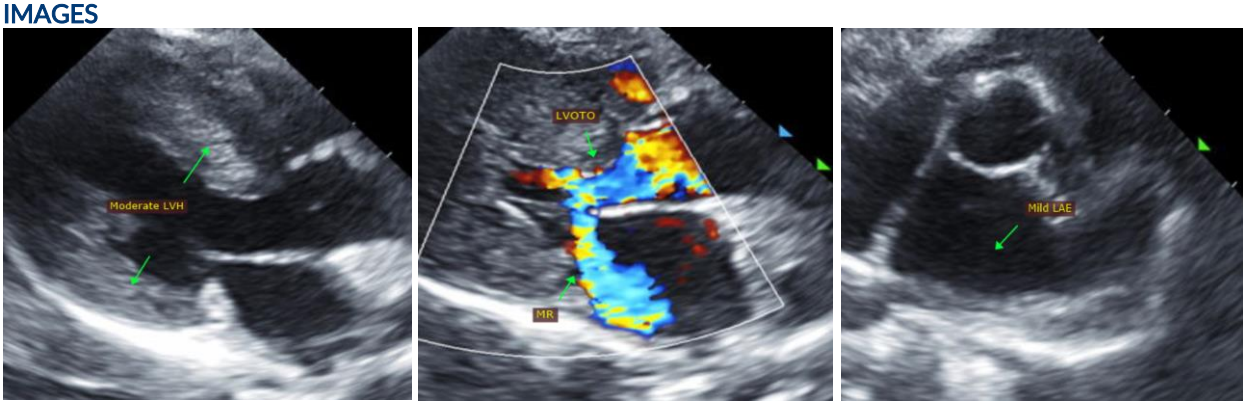
Monitor at home for any respiratory signs or blood clot events (neurologic change, paralysis, etc.) in the future.

PLAN

Continued management of the thyroid disease is recommended. Monitor BP/T4 every 6 months. Administer 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.

Recommend recheck echocardiogram in 6 months to assess for progression, sooner if clinical issues arise.

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.

Maggie Machen Lamy, DVM
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