



PATIENT

Elsa Jane Harbolt

SPECIES

Feline

BREED

DSH

SEX

Female

AGE

7 years

WEIGHT

10lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Sands Hill Mobile
Veterinary Ultrasound

HOSPITAL NAME

Surf City Animal
Hospital

REFERRING VET

Dr. Wick

INVOICE

22489

DATE

2/10/22

PRESENTING CLINICAL SIGNS

History: Presented 2-3-22 for labored breathing and ataxia. Grade 2/6 murmur/gallop rhythm noted. Diagnosed with mild to moderate LVH, normal LA, suspect HOCM and mild PCE. Recheck after treatment with Lasix 1mg/kg BID, and Plavix.

-Abnormal PE/Chem/CBC/UA Results: WBC 18,000, Neut 12, TP 9.3, Glob 5.8.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is mild to moderately hypertrophied with regions of irregularity. There is a diffusely hyperechoic endocardium consistent with fibrosis and ventricular remodeling. Papillary muscle remodeling. The right ventricle is subjectively normal in size and morphology. There is borderline left atrial enlargement present. No right atrial enlargement present. Borderline RVOT velocity with a dynamic profile. There is systolic anterior motion (SAM) of the mitral valve present (based upon color flow and Spectral imaging), with an 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. Tachycardia throughout.

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 | 0.35-0.55 | <2 (mean 1.5) | 3.5-0.55 | 35-67 | 80-100 |
| PATIENT | 4.5 | 250 | 0.64 | 1.0 | 0.64 | 61 | 92 |
| 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 | 1.33 | | 2.5 | 2.2 | NM |

**Note: All measurements based upon multi-modal images and methods. An average value is reported.*
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

Hypertrophic obstructive cardiomyopathy persists, similar to what was noted previously. Mild LV hypertrophy with borderline LA dilation is present, indicating the risk of spontaneous CHF and/or a thrombotic event, while currently low, may be elevated in the future. A screening BP and T4 are recommended every 6 months, as both can exacerbate disease.

A marked tachycardia is identified throughout this study, which is of unknown significance. Tachycardia alone can lead to acute decompensation and may or may not be related to the prior episode of pericardial effusion. Regardless, the effusion appears to have resolved with only Lasix therapy. While I am still not convinced that this previous episode reflects organic CHF without LA dilation prior or now, no further treatment is necessary based upon today's findings. If the effusion/clinical signs return, highly recommend referral to a multi-specialty center for advanced evaluation in this complicated case.



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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. Given the degree of hypertrophy, atypical history and significant tachycardia, consider initiate at this time as below. Ideally, obtaining a six-lead ECG prior to instituting the medication is recommended given the degree of tachycardia to ensure no additional issues are identified. If there is difficulty medicating at home, an alternative approach would be closely monitoring for progression in the next 6 months.

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, isoflurane maintenance. Risk for complication with steroid use typically follows LA dilation, which in this case is mildly elevated. If needed, monitoring of RR/RE is advised particularly in the initiation phase.

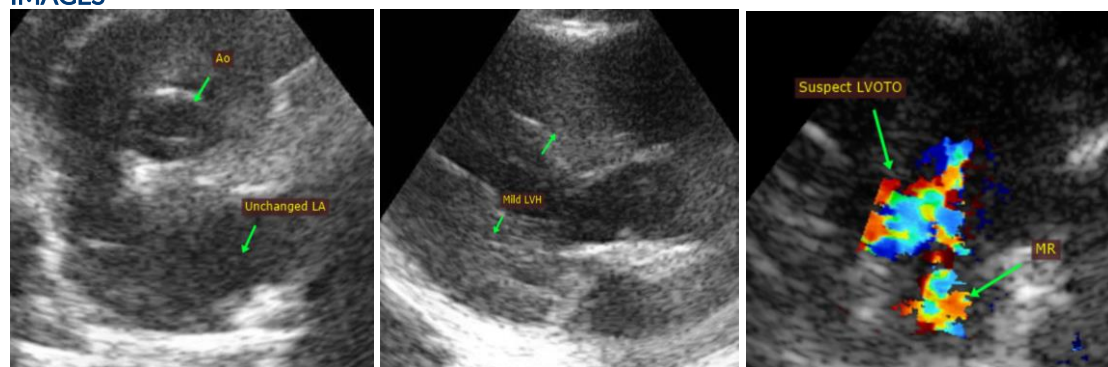
Monitor at home for any respiratory signs or blood clot events (neurologic change, paralysis, etc.) in the future.

PLAN

Screening BP/T4. Baseline ECG strongly recommended. 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
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com



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