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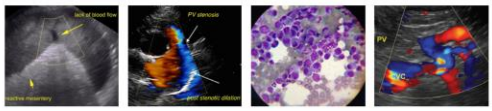

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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PATIENT
Titus Zurko

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
6 years

WEIGHT
10.86lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Littleton Animal Hospital

REFERRING VET
Dr. Cox

INVOICE
21200

DATE
9/23/21

PRESENTING CLINICAL SIGNS

History: Recheck echo. History chronic valvular disease, mild, pulmonary hypertension, mild, HCM. Currently doing well at home. BP: 160mmHg. Current medications: Atenolol 6.25mg BID -Pertinent previous echo findings: LA 2.2 cm; LA:Ao 2.04; IVS 0.90 cm; PW 1.0 cm; LVOT 1.52 m/s; severe LAE; no SAM; moderate LVH; mild pHTN (TR 1.2 m/s)

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV internal diameter is normal with decreased myocardial function. The LV wall thicknesses asymmetric with regions of irregularity with moderate to severe hypertrophy overall. The LV myocardium appears remodeled. The papillary muscles are remodeled and hyperechoic.
Left atrium: The left atrium and auricle are markedly dilated with significant spontaneous contrast. No obvious thrombi are seen.
Mitral valve: The mitral valve is normal in structure and mobility. No systolic anterior motion is seen. Mild central mitral regurgitation secondary to annular stretch.
Aortic valve/Aorta: Aortic valve is normal. Normal outflow velocity, laminar flow. No AI.
Right ventricle: Right ventricular is mildly affected as well with mild RV hypertrophy.
Right atrium: Moderate right atrial enlargement.
Tricuspid valve: Tricuspid valve is mildly thickened with mild TR. Normal velocity.
Pulmonic valve/Pulmonary artery: The pulmonic valve appears normal in morphology and mobility. Normal pulmonic outflow velocities with laminar flow. No PI.
Pericardium/other: Scant pericardial effusion. No pleural effusion noted. No obvious cardiac masses.
Heart rhythm: ECG reveals a sinus rhythm with an average HR of 140bpm.

2-Dimensional Measurements

Ao diam (cm)	0.9
LA diam (cm)	2.38
LA:Ao (Swe)	2.5
IVS thickness (cm)	0.82
LVID diastole (cm)	1.36
PW thickness (cm)	0.72
LVID systole (cm)	0.9
FS (%)	35

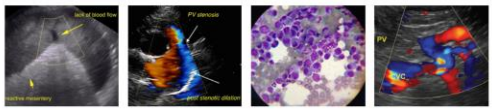
Doppler Measurements

PV Vmax (m/s)	0.52
AoV Vmax (m/s)	0.64
MR Vmax (m/s)	NA
TR Vmax (m/s)	2.5
TR PG (mmHg)	25

INTERPRETATION OF THE FINDINGS

Hypertrophic cardiomyopathy (HCM) is a rule out diagnosis for LV hypertrophy once a patient is confirmed euthyroid and normotensive. Both should be considered; however, in a young patient primary disease is suspected. The left atrium is markedly enlarged, indicating elevated risk for spontaneous CHF and/or blood clot events with a significant amount of spontaneous contrast. The right heart is also affected with moderate RA dilation and smoke visualized. Compared to the prior study, these findings do suggest progression in LA dimension and LV appearance. In my opinion, MR and TR are secondary rather than reflecting primary CVD and are hemodynamically insignificant.

Any without reported symptoms, there is great concern this patient is on the verge of imminent congestive heart failure and fully lifelong cardiac support is recommended as below. Atenolol is being given without evidence of or history of an LVOTO, and can be



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discontinued. The resting HR is relatively low and FS depressed, and beta blockade may actually have negative consequence in this case.

The mean survival time for cats with CHF is <8-12 months; however, most cats are able to maintain a good quality of life on medications. Patient will always be at high risk for recurrent episodes of CHF, development of blood clots, malignant arrhythmias and/or sudden death in the future.

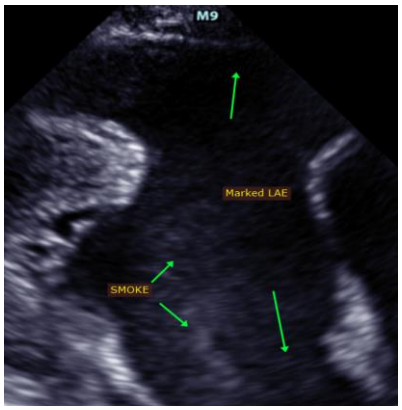
RECOMMENDATIONS

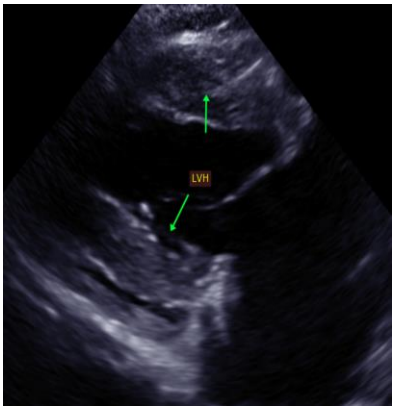
- Institute furosemide 1-2mg/kg PO q12h.
- Institute Pimobendan 1.25mg PO q12h (off label use).
- Institute blood thinner Clopidogrel (Plavix) 75mg tablets; give ¼ tab orally once daily (NOTE: this medication is very bitter on the cut edges and should be coated in entirety or administered in a gel cap).
- Decrease atenolol to ¼ tab PO q24h for 1 week, then discontinue.
- Monitoring of sleeping breathing rates at home is recommended as the best way to screen for recurrent CHF at home. Avoid anesthesia, steroids and fluid therapy unless absolutely necessary in the future.

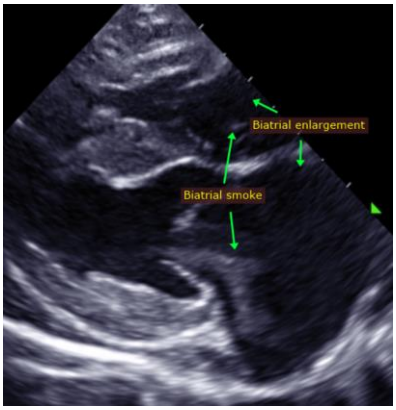
PLAN

- Monitor renal values and BP in 1-2 weeks, then every 4-6 months lifelong. If patient is doing well at this time and BP is >130mmHg institute ACE-I 0.5mg/kg PO q12h.
- A recheck echocardiogram is recommended in 6 months to assess for progression.

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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