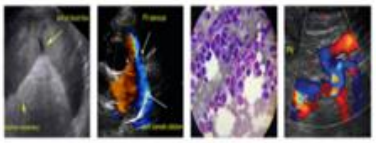
Mass Veterinary Services



SonoPath
Clinical Sonography & Telecytology
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1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT
Casper Gagnon

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
13 years

WEIGHT
16.8lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
28696

DATE
2/123

PRESENTING CLINICAL SIGNS

History: Casper was seen yesterday for mild to moderate dyspnea. History of heart murmur not worked up. Radiographs revealed marked cardiomegaly; diffuse bronchial pattern throughout chest; mild bronchoalveolar pattern perihilar area; slightly hyperinflated lungs. CXR also is very suspicious for asthma---albuterol? montelukast? He is presently eating well with normal activity. He did seem a bit better after the inhaled steroids yesterday. On exam: Obese. gallop rhythm noted, grade III/VI parasternal murmur, PSS, lung fields slightly harsh caudally, compressible thorax, mm pink, moist, CRT<2. BP: 160mmHg x 4. *Sedated with alfaxalone for study.

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

A single lead ECG is available; 25mm/s, 10mm/mV. The average heart rate is 200bpm with a largely regular rhythm. The rhythm is sinus in origin, with a p for every QRS complex and vice versa. P morphology is positive. The QRS is inverted. Isolated VPCs are appreciated; singles only and rare in frequency. No supraventricular premature beats, pauses or other dysrhythmias observed.
ECG diagnosis: Normal sinus tachycardia with isolated VPCs.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: The LV diameter is normal with adequate myocardial function. The LV wall thicknesses are irregular with significant posterior hypertrophy. The endocardium appears remodeled. The papillary muscles are mildly hypertrophied.
Left atrium: The left atrium and auricle are severely dilated. Subtle smoke is seen throughout both regions.
Mitral valve: The mitral valve is normal in structure and mobility. No systolic anterior motion is seen. Mild central mitral regurgitation.
Aortic valve/Aorta: Aortic valve is normal. Normal outflow velocity, laminar flow. No AI.
Right ventricle: Right ventricular appears normal.
Right atrium: The right atrium is normal.
Tricuspid valve: Tricuspid valve is normal with trace TR.
Pulmonic valve/Pulmonary artery: The pulmonic valve appears normal in morphology and mobility. Decreased pulmonic outflow velocities with laminar flow. No PI.
Pericardium/other: Small to moderate volume pericardial effusion. No obvious pleural effusion. No obvious cardiac tumors.

2-Dimensional Measurements

Ao diam (cm)	1.0
LA diam (cm)	2.4
LA:Ao (Swe)	2.4
IVS thickness (cm)	0.67
LVID diastole (cm)	1.73
PW thickness (cm)	0.80
LVID systole (cm)	1.0
FS (%)	41

Doppler Measurements

PV Vmax (m/s)	0.62
AoV Vmax (m/s)	NM
MR Vmax (m/s)	NA
TR Vmax (m/s)	NA
TR PG (mmHg)	NA

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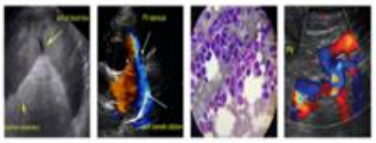

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INTERPRETATION OF THE FINDINGS

Hypertrophic cardiomyopathy (HCM) is a rule out diagnosis once hypertension and hyperthyroidism has been considered. Given the severity of what is seen here, primary disease is suspected in this normotensive cat. Regardless, the left atrium is severely enlarged with evidence of smoke, indicating high risk for spontaneous CHF and/or blood clot events. These findings certainly confirm the origin of pericardial effusion is congestive heart failure, with end-stage disease identified. Institution of full cardiac medications are recommended as below, and hospitalization should be considered if the patient appears unstable. These findings do not rule out concurrent asthma in this case and if persistent respiratory signs are noted, reevaluating the chest radiographs may be beneficial.

The ECG shows isolated VPCS, which are no questions secondary to severe structural disease in a patient in crisis. What is seen here does not warrant therapy. It is worth noting that occasional salvos of tachycardia are noted throughout the study and may suggest more malignant issues such as VT. If hospitalized consider continuous ECG monitoring to ensure additional medications are not necessary.

Even if we are able to stabilize the situation, the mean survival time for cats at this stage of disease is 8-12 months. 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.

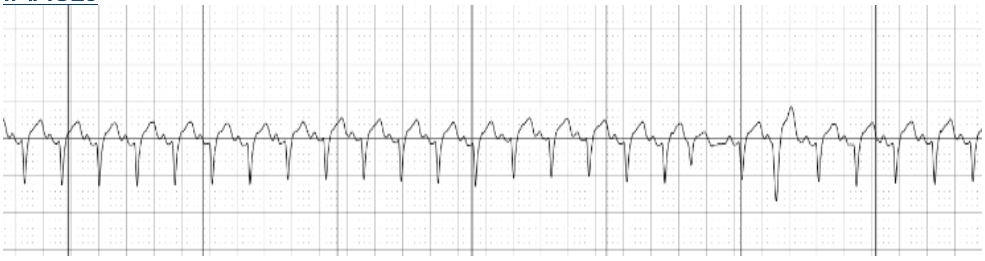
RECOMMENDATIONS

- Consider hospitalization for supportive care, ecg monitoring if needed.
- Institute Furosemide 1-2mg/kg PO q12h.
- Institute Plavix 75mg tabs; Give ¼ tab by mouth every 24 hours (NOTE: bitter along cut edge, may cause foaming at the mouth; coat in entirety).
- Institute Pimobendan 1.25mg PO q12h.
- Immediate ECG reassessment should any syncope be noted in the future.
- Monitoring of sleeping breathing rates at home is recommended as the best way to screen for recurrent CHF at home.
- Avoid anesthesia, steroids and/or fluid therapy unless absolutely necessary in the future.

PLAN

- Monitor renal values/BP in 1-2 weeks, then every 3-4 months lifelong. If BP is >130mmHg and patient is doing well at home, consider an ACE-I 0.5mg/kg PO q12h.
- A recheck echocardiogram is recommended in 6 months to assess for progression, sooner if issues arise in the interim.

IMAGES



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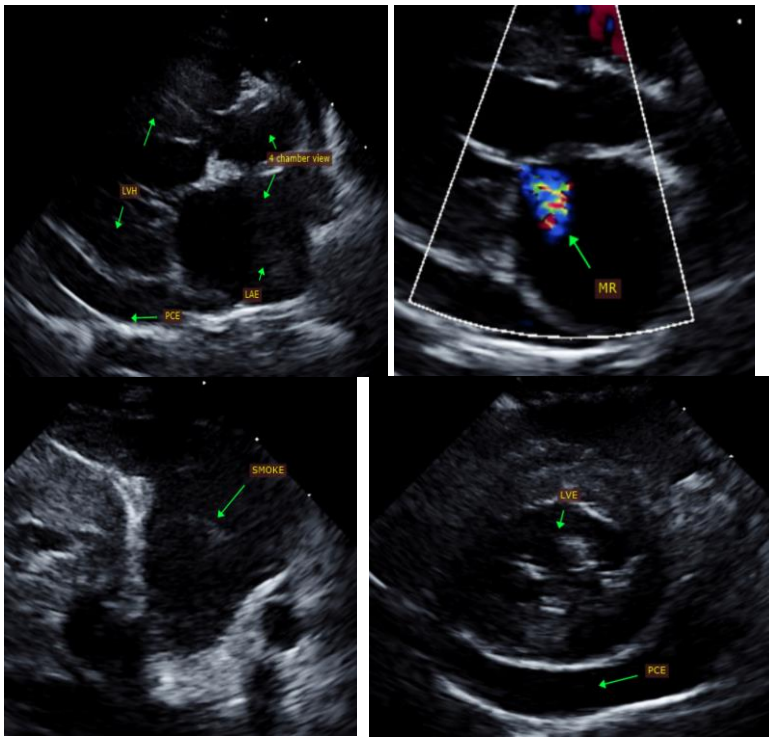

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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

Echocardiogram performed by: Pamela Harrigan, RDCS
Pet Animal Ultrasound Service (4paus.com)