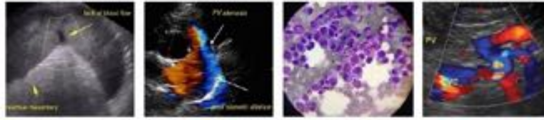


PATIENT

Jim Ostrander

SPECIES

Feline

BREED

Domestic Shorthair

SEX

Neutered male

AGE

5 years

WEIGHT

14.7 lbs

INTERPRETED BY

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY

Kelly Reschny

HOSPITAL NAME

St. Catharines AH

REFERRING VET

Dr. Boctor

INVOICE

32165

DATE

8//4/22

PRESENTING CLINICAL SIGNS

History: came in open mouth breathing, rads showed pulmonary edema (report attached) meds: furosemide, buprenorphine, lidocaine CRI

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm) Long axis	LVWd (cm) Long axis	FS (%)	EF (%)
NORMAL PARAMETER	------	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT	6.68	213	0.62	1.46	0.64	45.5 = 46	NM
FELINE CARDIAC PARAMETERS	**LA/AO** (Boon)	**LA/AO HEART BASE** (Sisson)	**LA** 2D 4-chamber long axis AS to FW (Sisson) (cm)		**LVOT VEL.** (m/s)	**RVOT VEL.** (m/s)	**IVRT** (m/)
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7		<1.6	<1.3	40-60
PATIENT	2.15	1.62 ACVIM =	NM		0.96	1.95	NM

Adapted from June Boon, Veterinary Echocardiography, 1998
Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705

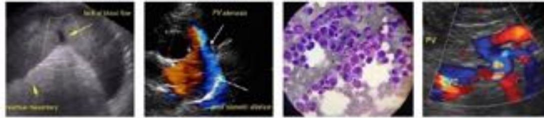
Radiographs

Cardiomegaly and changes consistent with pulmonary edema

Echocardiographic findings

Mitral valve

- Valve leaflets: No abnormalities
- Mitral regurgitation: Mild
- Left atrium: Marked left atrial enlargement
- Left auricle: Marked left auricular enlargement
- LA: Ao ratio: Marked increase
- Left ventricle: Within normal limits
- No systolic anterior motion of the mitral valve ("SAM")
- No evidence of "smoke"



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Tricuspid valve

- Valve leaflets: No abnormalities
- Tricuspid regurgitation: Mild (short axis view)
- Right atrium: No enlargement
- Right auricle: No enlargement
- Right ventricle: No enlargement

Aortic valve

- Valve leaflets: No abnormalities
- Aortic insufficiency: Absent
- Turbulent blood flow in the left ventricular outflow tract: Mild

Pulmonic valve

- Valve leaflets: No abnormalities
- Pulmonary insufficiency: Absent
- Turbulent blood flow in the right ventricular outflow tract: Moderate to marked
- Main pulmonary artery and bifurcations: no abnormalities
- Pulmonary artery: aortic ratio: no obvious abnormalities (measurement not performed)

Other

- Pulmonary edema: Absent, however, had received furosemide
- Pericardial and pleural effusion: Absent
- Pulmonary veins: Subjectively, mildly dilated
- Intracardiac mass: No obvious signs
- Endocardium: Mild hyperechogenicity
- Myocardium: No abnormalities

ULTRASONOGRAPHIC FINDINGS

Cardiac

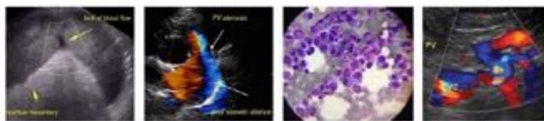
Previously diagnosed with hypertrophic cardiomyopathy. Presented with signs of congestive heart failure (ACVIM stage C). Severe left atrial and left auricular enlargement are present, without the presence of a thrombus or smoke.

Presence of mildly turbulent blood flow in the LVOT and severely turbulent blood flow in the RVOT (DRVOTO), with an accelerated velocity of the RVOT.

Although he is still quite young, consider evaluating for hyperthyroidism to exclude as underlying cause for decompensation

Prognosis is difficult to determine.

Risks of thromboembolic should be discussed with the client.



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Cardiac

The following are suggested/recommended

An arterial blood pressure

Wean the lidocaine CRI

atenolol: consider decreasing the dose by 50% due to congestive heart failure (negative inotrope)

furosemide 20 mg/tablet. Administer 1.5-2 mg/kg PO q12h for 5 days, then decrease by 25-50% every 3 days.

The goal is to maintain Jim on the minimum dose that is effective in controlling his resting respiratory rate less than 30 breaths per minute. Every 8 hours may be considered, if necessary, but monitor renal function.

clopidogrel 75 mg/tablet. Administer ¼ of a tablet once a day. Administer with food. May need to place in empty gelatin capsule to camouflage bitter taste. This medication may be started in 2 to 3 days, once Jim is feeling better. Gastrointestinal side effects possible.

spironolactone is suggested to help decrease the risk of fibrosis, and may help decrease preload (slightly), and the dose of furosemide required to control pulmonary edema. Dose of 0.5-1 mg/kg PO once a day for 3 days, then every 12 hours thereafter. The dose may be increased to 1.5-2 mg/kg PO every 12 hours, depending on renal function.

benazepril may be added in the next few weeks, depending on how Jim is doing clinically, arterial blood pressure and renal function. Initiate slowly 0.10 mg/kg PO once a day for 3 days, then 0.25 mg/kg PO once a day for 3 days, then every 12 hours thereafter.

+/- pimobendan, depending on Jim's response to the above therapy

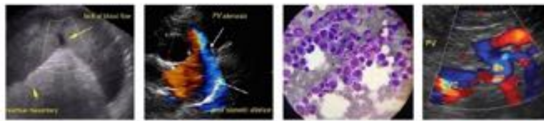
Monitoring of the resting (sleeping) respiratory rate (RRR) is highly recommended once a day. The RRR should NOT EXCEED 30 breaths per minute (bpm). If the respiratory rate is greater than 30 bpm, *or* if there is a gradual increase (over a day or two) toward 30 bpm, administer an additional dose of furosemide and adjustments to his heart medications will be required.

Blood work, CBC, serum biochemical profile, including a SDMA, and arterial blood pressure, are recommended in 10-14 days, once the dose of spironolactone has been achieved. If cost prohibitive, a PCV/TS may be performed instead of a full CBC.

As mentioned above, total T4 or fT4 may be considered to exclude hyperthyroidism as a cause for decompensation (despite his young age)

An echocardiogram is suggested in 3-6 months to ensure his parameters remain stable, i.e., cats with HCM can evolve and develop restrictive cardiomyopathy with time.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 info@thefocalzone.com

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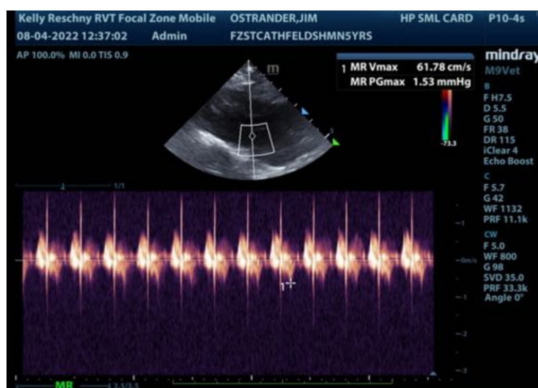

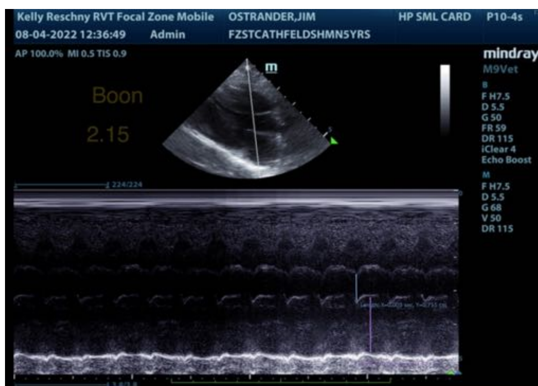

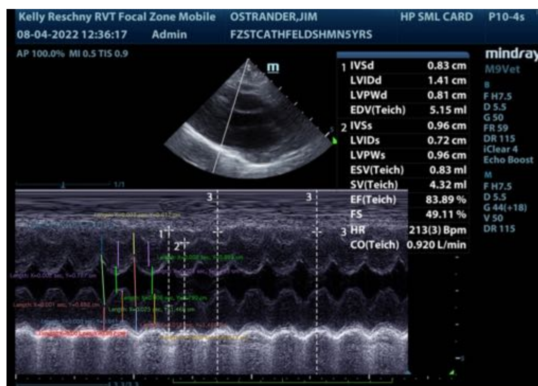

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

Lisa.Carioto@sonopath.com