



PATIENT

Snowflake Osburn

PRESENTING CLINICAL SIGNS

History: Heart murmur on routine presurgical exam. Smaller than littermate, not growing at same rate. Possible arrhythmia on auscultation

SPECIES

Feline

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only. Cardiomegaly. No obvious evidence of CHF.

BREED

DSH

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 220bpm with a largely regular rhythm. The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P and QRS morphologies are positive. No ectopic beats, pauses or other dysrhythmias observed.

SEX

Female Intact

ECG diagnosis: Normal sinus tachycardia.

AGE

4 months

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall thickness is mildly increased. There is a mildly hyperechoic endocardium consistent with fibrosis and ventricular remodeling. Mild papillary muscle remodeling. The right ventricle is subjectively normal in size and morphology. There is minimal left atrial enlargement present. No right atrial enlargement present. Normal RVOT velocity. Mild systolic anterior motion (SAM) of the mitral valve present, with an elevated dynamic LVOT velocity (not captured on spectral doppler. There is mild eccentric mitral regurgitation present secondary to SAM. The mitral valve leaflet appears mildly thickened. Trace TR. There is no pericardial effusion noted. No pleural effusion appreciated. No obvious cardiac tumors.

WEIGHT

5.2lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

CARDIAC CHART

IMAGING PERFORMED BY

Sarah Pender, CVT

HOSPITAL NAME

SVS Imaging QC

REFERRING VET

Dr. Sherrod

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) <small>(Moise, Pipers)</small>	LVIDd (cm) <small>(Moise, Pipers)</small>	LVWd (cm) <small>(Moise, Pipers)</small>	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	2.4	220	0.61	1.2	0.61	56	881
FELINE CARDIAC PARAMETERS	LA/AO <small>(Boon)</small>	LA/AO HEART BASE (Swe) <small>(Abbott)</small>	LA 2D short axis Base view (cm) <small>(Abbott)</small>	LVOT VEL <small>(m/s)</small>	RVOT VEL <small>(m/s)</small>	E max <small>(m/s)</small>	
NORMAL	<1.5	<1.3	<1.2	<1.6	<1.3	<0.9	
PATIENT	1.6	1.2	1.1	1.0	1.3	NM	
<p><i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i> 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.</p>							

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3/3/23

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is mitral valve dysplasia, causing an LVOT obstruction. HOCM cannot be ruled as a contributing issues. Regardless, what is seen here is mild with mild LV thickening



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and minimal LA enlargement. No additional issues are identified. The ECG is unremarkable with a normal sinus tachycardia.

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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. If the patient is easily medicated, consider Atenolol at 6 months of age as below. If there is difficulty medicating at home, an alternative approach would be closely monitoring for progression in the next 6-12 months. Referral should be considered in an congenital case for diagnosis confirmation and lifelong monitoring.

BREED

DSH

Monitor at home for any respiratory signs or blood clot events (neurologic change, paralysis, etc.). 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 (ketamine, glycopyrrolate, atropine).

SEX

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PLAN

If able when 6 months old, institute 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. Consider referral as the discussed as the gold standard.

AGE

4 months

Recommend recheck echocardiogram in 6 months, sooner if clinical issues arise.

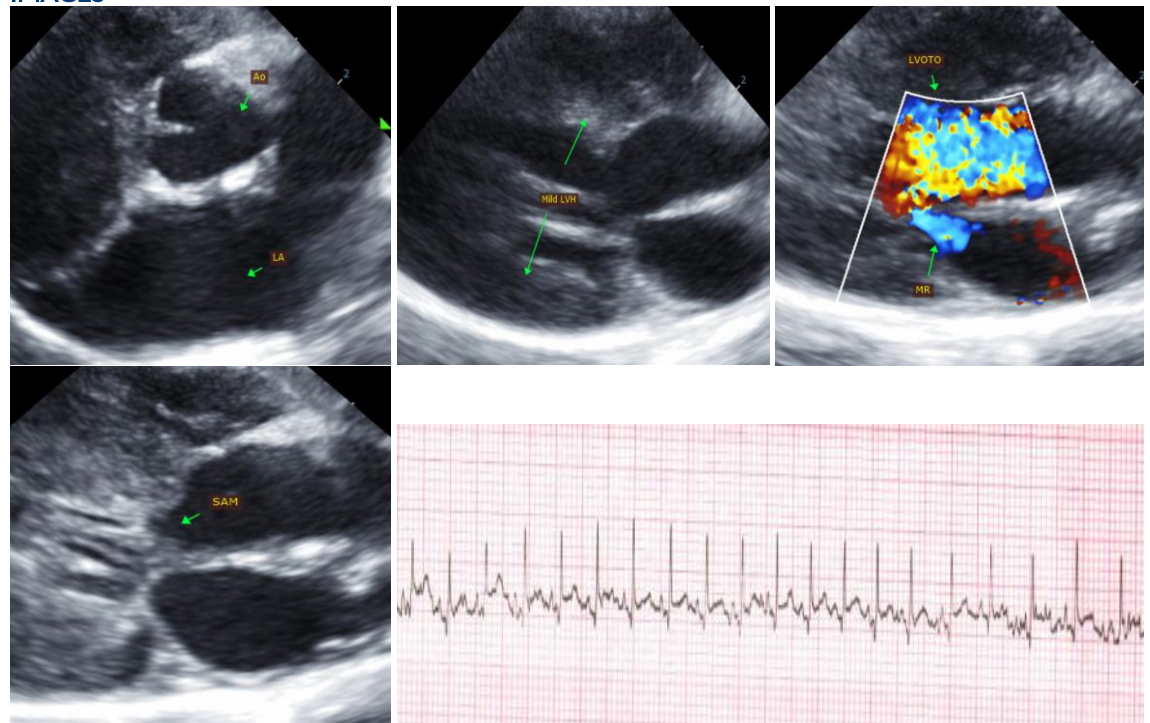
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Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGES



IMAGING PERFORMED BY

Sarah Pender, CVT

HOSPITAL NAME

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REFERRING VET

Dr. Sherrod

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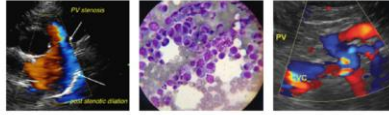
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

SPECIES

Feline

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.

BREED

DSH

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com

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