



PATIENT

Chance Borowy

SPECIES

Canine

BREED

Golden Retriever

SEX

Male Intact

AGE

6 months

WEIGHT

61.5lbs

INTERPRETED BY

Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan,
RDCS

HOSPITAL NAME

Mass Veterinary Services

REFERRING VET

Dr. Masloski

INVOICE

28062

DATE

1/3/23

PRESENTING CLINICAL SIGNS

History: Chance is referred to evaluate a murmur noted on his puppy exam. He is doing well clinically. Good appetite and activity level. On exam: NSR, grade III-IV/VI murmur noted best on sternum, PSS, lung fields clear, mm pink, moist, CRT<2. BP: 90-100mmHg.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.

Left ventricle: The LV wall is moderate to severely thickened. The endocardium is hyperechoic, consistent with fibrosis. Small fibrotic kissing lesion noted on the LVOT. The papillary muscles appear hypertrophied. The LV dimension is normal with adequate function.

Left atrium: The left atrium is mildly dilated.

Mitral valve: The anterior leaflet of mitral valve is thickened and elongated. The anterior leaflet can be seen occluding the LVOT in systole. Abnormal chordal attachment to the IVS. Moderate eccentric mitral regurgitation. Normal velocity.

Aortic valve/aorta: The aortic valve appears largely normal in morphology and mobility. Moderately elevated aortic outflow velocity. Moderate aortic insufficiency.

Right ventricle: Normal right ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension.

Right atrium: Normal RA dimension.

Tricuspid valve: The tricuspid valve appears normal with trivial tricuspid regurgitation.

Pulmonic valve/pulmonary artery: The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Normal RVOT velocity; laminar flow.

Pericardium/other: No pericardial or pleural effusion noted. No obvious cardiac masses.

Heart rhythm: ECG reveals a sinus rhythm with an average HR of 150bpm.

2-Dimensional Measurements

Ao diam (cm)	2.5
LA diam (cm)	3.5
LA:Ao (Swe)	1.4
IVS thickness (cm)	1.4
LVID diastole (cm)	3.5
PW thickness (cm)	1.2
LVID systole (cm)	2.3
FS (%)	34

Doppler Measurements

PV Vmax (m/s)	0.88
AoV Vmax (m/s)	3.8
MR Vmax (m/s)	5.6
TR Vmax (m/s)	NA
TR PG (mmHg)	NA

INTERPRETATION OF THE FINDINGS

The diagnosis is mitral valve dysplasia leading to an LVOT obstruction and secondary LV hypertrophy. Moderate to severe LV hypertrophy is concerning in such a young patient, with risk for progression going forward. A mild concurrent subaortic component is not entirely ruled out, although is considered less likely. Mild left atrial dilation indicates the risk for complication is currently low. Finally, a significant aortic insufficiency is appreciated, which may lead to volume overload going forward. No additional issues are identified.

Heart rate control with atenolol is recommended, as the dynamic nature of the obstruction will be reduced at lower heart rates. No other medications are indicated at this juncture.



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Prognosis is guarded prior to monitoring for progression and response to medication. Patient will be at risk for associated clinical signs including arrhythmias, CHF, and/or sudden death lifelong. **Patients with LV hypertrophy are at greater risk for arrhythmias and/or sudden death than CHF as they age.**

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RECOMMENDATIONS

- Institute titrating dose of atenolol: 25mg tablets; Give 1/2 tab once daily. Recheck heart rate in 1-2 weeks with target stressed rate of <140bpm. Increase as needed until target reached.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Mild activity restriction is advised lifelong.
- Monitor at home for any respiratory signs, clinical lethargy or collapse.
- 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.

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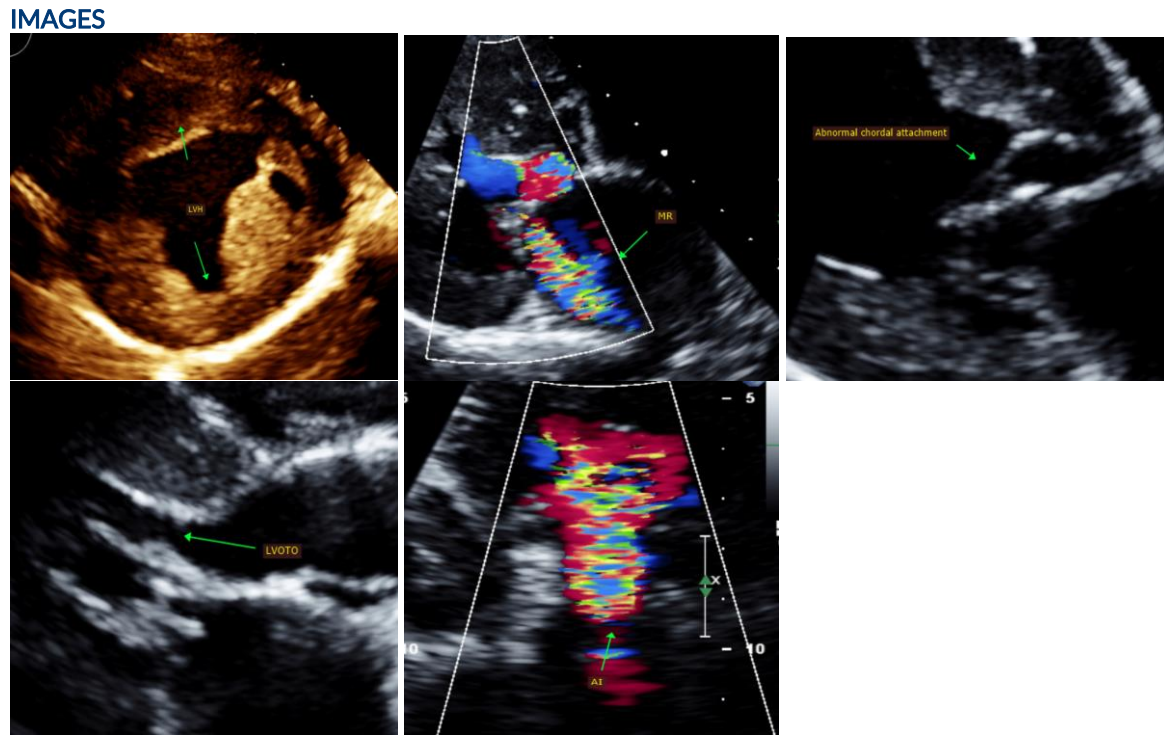
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PLAN

- Recommend recheck echocardiogram in 6 months to assess for progression, sooner if clinical issues arise.

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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.

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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.

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

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

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