



PATIENT PRESENTING CLINICAL SIGNS

PATIENT
Maya Ducat

History: Maya was noted to have a heart murmur in 2016. She was seen for dyspnea in mid September and started on lasix and pimobendan. She coughs after exercise. Maya is presently eating well with no S/V/D but is PU/PD - will be worked up for Cushing's. On exam, grade IV/VI systolic murmur.
-Current medications: 1) Pimobendan/vetmedin 3.75mg 1/2 tab twice a day 2) Lasix/furosemide 12.5mg 1/2 tab daily *Sedated with propofol for exam.

SPECIES

Canine

BREED

Chihuahua

ECHOCARDIOGRAM FINDINGS

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

Left ventricle: There is borderline LV dilation with adequate function. LV wall thicknesses are normal.

SEX

Female Spayed

Left atrium: The left atrium is moderately enlarged.

Mitral valve: The mitral valve is diffusely thickened without significant prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation. Normal velocity.

AGE

8 years

Aortic valve/aorta: The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. No aortic insufficiency.

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

Right atrium: Normal RA dimension.

WEIGHT

14.5lbs

Tricuspid valve: The tricuspid valve appears mildly thickened with septal prolapse. Moderate tricuspid regurgitation. Velocity consistent with moderate pulmonary hypertension.

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 130bpm.

INTERPRETED BY

Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

2-Dimensional Measurements

Doppler Measurements

Ao diam (cm)	1.2
LA diam (cm)	2.5
LA:Ao (Swe)	2.1
IVS thickness (cm)	0.87
LVID diastole (cm)	2.95
PW thickness (cm)	0.83
LVID systole (cm)	1.37
FS (%)	54

PV Vmax (m/s)	0.9
AoV Vmax (m/s)	1.67
MR Vmax (m/s)	4.9
TR Vmax (m/s)	3.8
TR PG (mmHg)	57

IMAGING

PERFORMED BY

Pamela Harrigan,
RDCS

HOSPITAL NAME

Mass Veterinary
Specialty Services

REFERRING VET

Dr. Masloski

INVOICE

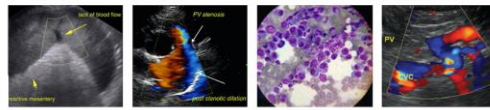
21734

DATE

10/27/21

INTERPRETATION OF THE FINDINGS

Chronic degenerative valve disease causing moderate mitral and tricuspid regurgitation. Moderate left atrial enlargement indicates there is relatively low risk for imminent complication, however risk for progression to spontaneous congestive heart failure in the future is elevated. Moderate pulmonary hypertension is noted, which may reflect underlying airway disease in this patient as well (that over time has led to PAH developing). No additional issues such as systolic dysfunction is appreciated. Assessment of progression in the future will help predict long term prognosis, which is guarded at this stage (B2/C).



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While it is uncommon for moderate valve disease to lead to CHF, if the symptoms dramatically improved with Lasix therapy then this would support the diagnosis. Lifelong medication should be continued as suggested below in this instance with twice daily Lasix dosing superior to once. That being said, if there is any question on the diagnosis or the response was minimal, I would consider discontinuing Lasix at this time and reassessing. As mentioned previously, this patient is highly predisposed to airway disease and this is suspected to be the origin of the cough (unless the improvement was dramatic). No obvious indication for Sildenafil therapy in the absence of exertional dyspnea or collapse; however, should these symptoms develop this can be added in the future.

Prognosis is guarded long-term; most patients are able to maintain a good quality of life on medications for some time. Patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future. Monitoring of renal values is recommended lifelong.

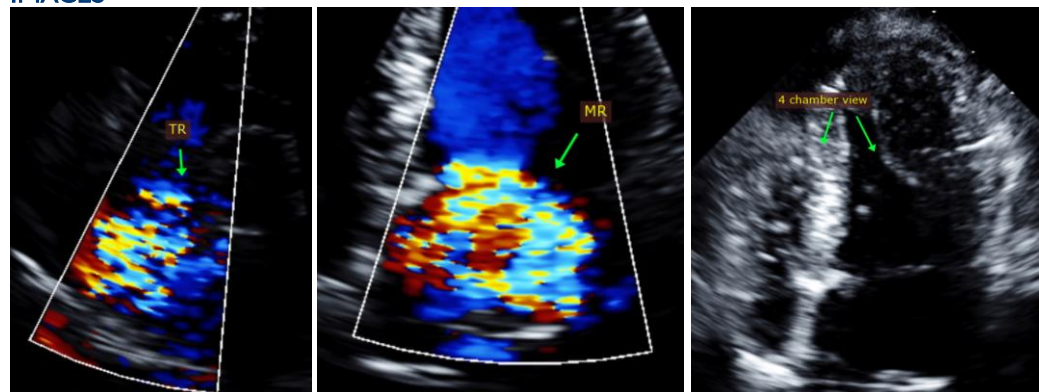
RECOMMENDATIONS

- Consider prior diagnosis. If CHF is suspected, continue BID Lasix 1-2mg/kg PO q12h.
- If CHF is not confirmed or suspected, consider discontinue Lasix therapy.
- Utilize Hydrocodone if needed for quality of life.
- Continue Pimobendan 0.25-0.3mg/kg PO q12h.
- BP assessment recommended. If >130mmHg, institute ACEI 0.5mg/kg PO q12h.
- If exertional syncope or dyspnea is noted, institute Sildenafil 1-2mg/kg PO q12h.
- Anesthetic risk is considered moderate and 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.

PLAN

- Monitor renal values and BP every 3-4 months.
- Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

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



PATIENT

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