



PATIENT

Chispi Vazquez

SPECIES

Canine

BREED

Chihuahua

SEX

Male Intact

AGE

11 years

PRESENTING CLINICAL SIGNS

History: Presented for coughing all night and having bubbles and nasal secretion with open mouth breathing. Bilateral heart murmur.

-Current medications: Vetmedin 1.25mg: 1/2 tablet PO BID, Furosemide 12.5mg: 1/2 PO BID.

-Radiograph: Cardiomegaly

-Blood pressure: 168/133. mean 145mmHg.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets (anterior>>posterior) with mild prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation with moderate left atrial dilation. Normal MR velocity. Borderline LV with adequate myocardial function. The tricuspid valve appears mildly thickened with moderate tricuspid regurgitation. Velocity consistent with mild pulmonary hypertension; however mild to moderate right heart enlargement suggests this may be an underestimation. Mild right ventricular prominence. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic outflow velocities. Normal aortic outflow velocities. Trace pulmonic insufficiency. No aortic insufficiency. The MPA is prominent. No pericardial or pleural effusion noted. No cardiac tumors observed.

CARDIAC CHART

WEIGHT

9.8lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Gabriel Ferrer,
DVM

HOSPITAL NAME

Pulse for Animal Care
Hospital

REFERRING VET

Dr. Quinones

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	5.5	3.3	NM	1.7	43	77	0.18
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short axis Base view (cm)	LVIDd Avg; 2D and m-mode short axis (cm)	LVIDs Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
PATIENT	120	1.2	0.7	4.4	1.9	2.0	1.1
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
BODY WEIGHT DEPENDENT PARAMETERS				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>				10	1.50 (3.8)	3.27 (3.5)	2.06 (3.1)
				15	1.83 (2.0)	3.71 (2.4)	2.43 (2.1)
				20	2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
				40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
				50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing moderate mitral and moderate tricuspid regurgitation. Moderate left and mild right atrial enlargement indicates there is risk for progression to congestive heart failure in the future. Significant TR and moderate PAH are also suspected, likely due to respiratory disease in this patient. Given the combination of MV disease

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and moderate pulmonary arterial hypertension I would continued Pimobendan at this time as below. No obvious indication for Sildenafil at this time; however, highly recommend aggressively addressing the cough. If any syncope or exertional dyspnea are noted, institute Sildenafil at that time. Prognosis is guarded at this stage (B2).

Given these findings, the cough is likely multi-factorial in origin. The left atrial enlargement may partially be causing mainstem bronchi compression; however, this breed is highly predisposed to both upper and lower airway disease as well and primary respiratory causes for coughing should also be considered. Baseline chest radiographs are strongly recommended to understand likely pulmonary disease. Given these findings in addition to a respiratory sinus arrhythmia during the exam, CHF is considered unlikely, and Lasix should be discontinued. Consider pulmonary antibiotics, hydrocodone, etc. for any acute worsening of the symptom. It is important to note that PAH is not the cause of a cough; rather it develops secondary to the chronic cough. Adequate cough control is the most important tool in preventing or slowing its progression.

Once on the medication for 3-5 days, anesthetic risk is considered moderately elevated. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction) are recommended. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Judicious IV fluid rates are recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated. **Pre-oxygenate for 5-10 min prior to intubation and recover in O2 if possible.**

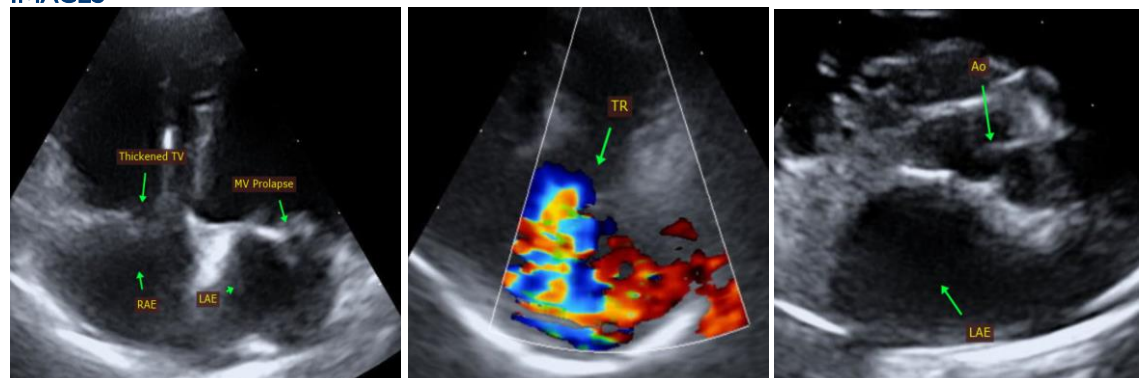
Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a progressive cough, labored breathing, exercise intolerance or collapse episodes.

PLAN

Screening BP is recommended. Continue heart muscle support Pimobendan, 0.25-0.3mg/kg PO BID. Discontinue Lasix as discussed. Baseline chest radiographs are recommended. Aggressive cough suppression/treatment is recommended as discussed. If exertional dyspnea/collapse is noted and/or patient is refractory to therapy, consider institute Sildenafil 1-2mg/kg PO q8h. Consider course of Baytril or antibiotic, theophylline, etc.

Recommend monitor for progression with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

IMAGES





PATIENT

Chispi Vazquez

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

Canine

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.

BREED

Chihuahua

Maggie Machen Lamy, DVM
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info@sonopath.com

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