



PATIENT

Burton Pendura

PRESENTING CLINICAL SIGNS

History: Syncopal episode 2 days ago, now lethargic. Grade 4/6 heart murmur. Cardiomegaly on CXR. Hyperechoic splenic mass is suspected on abdomen scan.

SPECIES

Canine

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only.

Cardiomegaly. No obvious evidence of CHF.

BREED

Minature Schnauzer

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The mitral valve is markedly diffusely thickened with prolapse into the left atrial lumen. There is severe eccentric mitral regurgitation present. The MR velocity is normal. There is severe left atrial enlargement. There is mild left ventricular dilation. Left ventricular systolic function is hyperdynamic. There is normal systolic flow velocity across the aortic valve. The aortic valve appears trileaflet with normal mobility. The main pulmonary artery is mildly dilated. Mild right atrial and right ventricular dilation. The tricuspid valve is mildly thickened with mild to moderate tricuspid regurgitation. Velocity indicative of moderate pulmonary hypertension. No pericardial/pleural effusion or cardiac masses

AGE

13 years

CARDIAC CHART

WEIGHT

13.9lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

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	4.8	3.9	2.3	2.2	36	67	0.2
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	NM	0.9	0.5	6.3	2.1	3.5	2.0
*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)
*Note: All measurements based upon multi-modal images and methods. An average value is reported.				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 severe mitral and mild to moderate tricuspid regurgitation. Severe LA dilation enlargement indicates the risk for spontaneous congestive heart failure is elevated and cardiac supportive medications are indicated as below. There is also at least moderate pulmonary arterial hypertension which should be monitored going forward. No additional issues are identified. No intra or extra-cardiac masses are appreciated; however, it is

IMAGING PERFORMED BY

C. Belan, DVM

HOSPITAL NAME

Alpine 24/7 Animal Hospital

REFERRING VET

Dr. Bruce

INVOICE

23985

DATE

5/3/22



PATIENT	important to note that these are easily missed in the absence of effusion. If suspicion is high, advanced imaging may be warranted.
Burton Pendura	
SPECIES	Syncope in a dog with this degree of structural disease is most likely cardiogenic in origin, although in light of abdominal pathology some additional issue may be at play. Cardiac causes include pulmonary hypertension (moderate in this case), early CHF/poor cardiac output (very possible), rupture of a chord or LA tear (not seen), arrhythmia (possible), or vasovagal events (possible). Given the degree of LA dilation and the severity of MR, I am concerned for early CHF and decompensation as a possibility. Even without obvious radiographic evidence of CHF I would initiate full cardiac support and monitor closely for improvement/persistence of symptoms. Sildenafil is also recommended to lower pulmonary pressures. If episodes still persist, other causes should be investigated (holter monitor, neurology consult, etc.).
Canine	
BREED	
Minature Schnauzer	
SEX	Close monitoring for development of associated clinical signs (development of a cough, labored breathing, exercise intolerance or worsening collapse episodes) is recommended. Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF at home. Prognosis is guarded to poor given the severity of cardiac disease and dilation and high risk for decompensation, worsening collapse episode, and/or development of spontaneous CHF.
Female Spayed	
AGE	
13 years	
WEIGHT	Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit.
13.9lbs	
INTERPRETED BY	Elective anesthesia is not advised, as there is high risk for complication. Risk: benefit ratio should be considered. Consider consultation with and/or referral to a facility with an anesthesiologist. Should you elect to proceed, cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, iso or sevoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction and recover in O2 cage. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Moderate IV fluid restriction is recommended to avoid fluid overload, while considering comorbidities, hydration status, BP, etc. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.
Maggie Machen Lamy, DVM, DACVIM (Cardiology)	
IMAGING PERFORMED BY	PLAN
C. Belan, DVM	Institute Pimobendan 0.3mg/kg PO q12h. Institute furosemide (Lasix) 1mg/kg PO q12h. Institute Benazepril/Enalapril 0.5mg/kg PO q12h. Institute sildenafil 1-2mg/kg PO q12h. If syncope persists, further evaluation is advised.
HOSPITAL NAME	Lab work is recommended in 1-2 weeks to ensure tolerance of medications, then every 3-4 months lifelong.
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REFERRING VET	A recheck echocardiogram is recommended in 4-6 months to screen for progression, sooner if clinical signs arise.
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HOSPITAL NAME

Alpine 24/7 Animal
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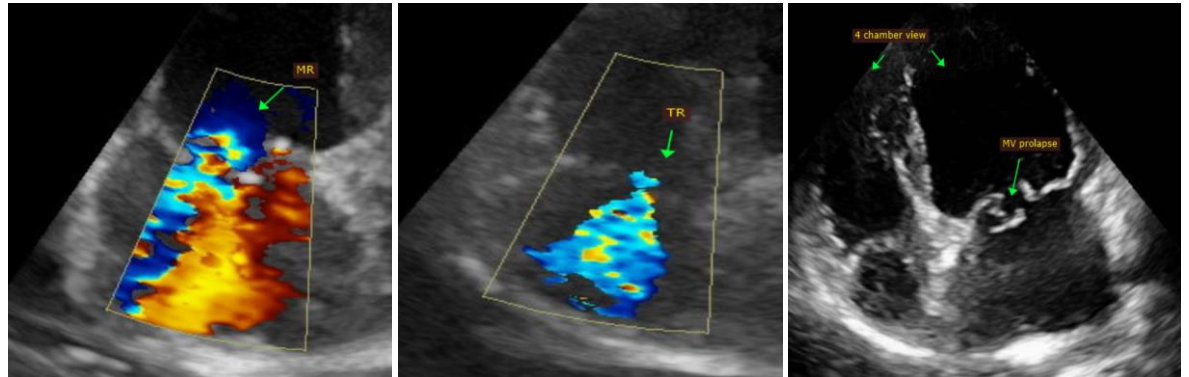
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IMAGES



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 visible in the image/video clips provided.

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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