SonoPath
Clinical Sonography & Telecytology
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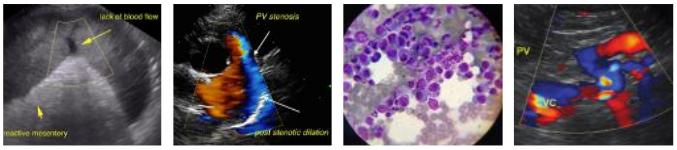


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Peanut Parks

SPECIES
Canine

BREED
Chihuahua

SEX
Female Spayed

AGE
~10.5 years

WEIGHT
3.9lbs

INTERPRETED BY
Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY
Dana Alterman, RDCS, LVT

HOSPITAL NAME
Eubank Animal Clinic

REFERRING VET
Dr. Kastenholz

INVOICE
22195

DATE
11/29/21

PRESENTING CLINICAL SIGNS

History: Presented with syncope, respiratory changes and high HR on Nov 27th, here at high altitude (7200 feet). Usually lives at sea level. No cardiac history. On heartworm preventative.
CXR Report (AIS): possible PA/RH enlargement, caudal infiltrate
Currently hospitalized on sildenafil 1.25mg PO BID, Pimobendan 6.25mg PO BID, Furosemide 3.5mg PO BID.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with significant prolapse into the left atrial lumen. Mild eccentric mitral regurgitation with no left atrial dilation. Decreased LV diameter with adequate myocardial function. Mild LV hypertrophy consistent with pseudohypertrophy. The tricuspid valve appears thickened with no tricuspid regurgitation. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No aortic insufficiency or pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

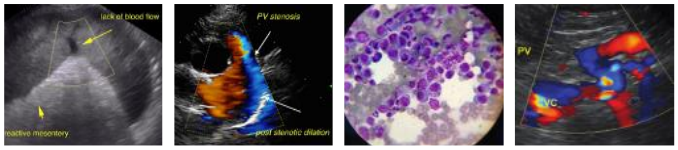
CARDIAC CHART

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	NM	NA	NM	1.2	58	90	NM
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	1.0	1.76	1.1	1.4	0.6
*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)

Adapted from June Boon, Veterinary Echocardiography, 1998
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435
Hansson et al, Vet Rad and Ultrasound 2002
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing mild mitral regurgitation. Lack of significant left atrial enlargement indicates the current risk for complication is low. The LV walls are increased with a small LV chamber which is most consistent with pseudohypertrophy; this typically develops secondary to volume depletion. Concurrent systemic hypertension should be ruled out as a contributing factor once the patient is stabilized. No concurrent issues such as systolic dysfunction or significant pulmonary hypertension are noted in this study.



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Given these findings, the clinical signs are **unlikely to be due to congestive heart failure**. What is difficult to interpret is the vast difference in RH/MPA appearance in this study as compared to the CXR report. Reasonable to continue Sildenafil/Pimobendan (particularly if the patient is improved clinically; however, the risk for CHF is not appreciated here. In the absence of persistent RHE, transient pulmonary hypertension is possible such as a PTE; however, this is a presumptive diagnosis. No obvious indication for Lasix therapy at this time and this can and should be safely discontinued. Additionally, assessing the patient's volume status is highly recommended, as cautious fluid therapy may be indicated. Finally, the respiratory signs should be considered more likely respiratory in origin, and coverage with BS antibiotic therapy may be indicated depending on patient status.

Continued assessment of progression in the future will help predict long term prognosis, which is highly variable at this stage (B1). Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

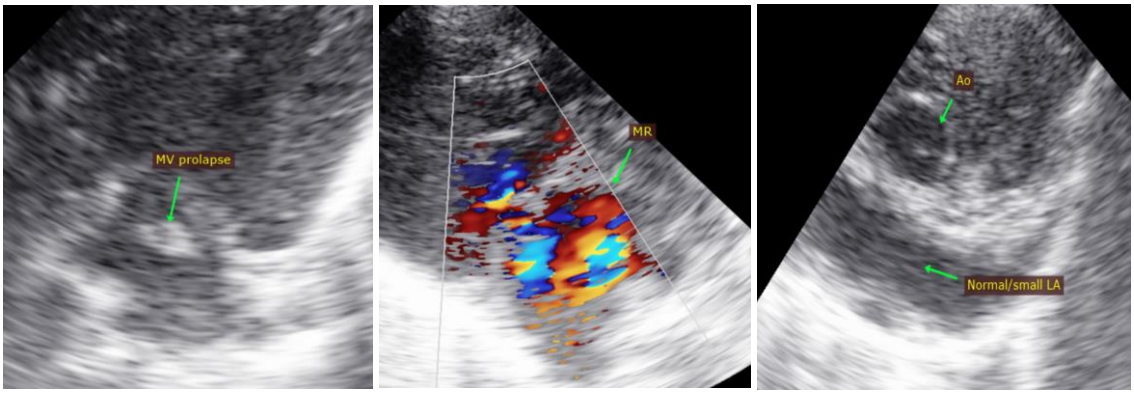
Anesthesia is not advised prior to volume assessment and stabilization.

PLAN

Discontinue Lasix as discussed. Consider respiratory work up/treatment if indicated. Reasonable to continue Sildenafil (1-2mg/kg PO q8-12h) and Pimobendan (0.25-0.3mg/kg PO q12h). A baseline BP and lab work is strongly recommended with fluid resuscitation if indicated.

Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

IMAGES



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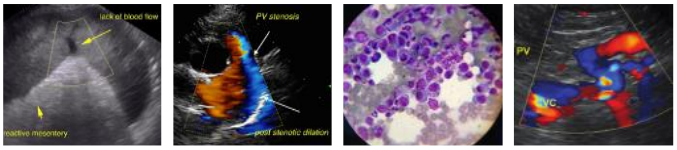

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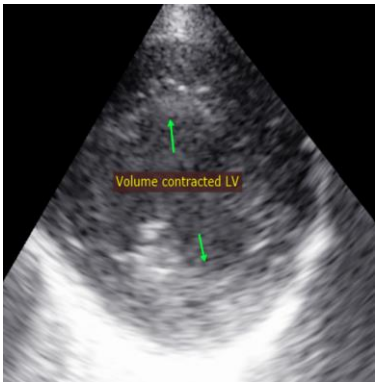

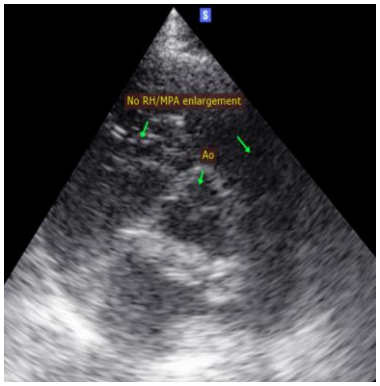

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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