



PATIENT

Shadow Saddoris

SPECIES

Canine

BREED

Chihuahua Mix

SEX

Female Spayed

AGE

13 years

WEIGHT

8.8lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Amanda Crook,
SDEP

HOSPITAL NAME

Rivers Edge Pet
Medical Center

REFERRING VET

Dr. Gray

INVOICE

21817

DATE

11/2/21

PRESENTING CLINICAL SIGNS

History: Patient schedule for dental today for bilateral carnassial abscesses and severe dental disease - has been on Clindamycin, meloxicam, and gabapentin since 10/26. Abnormal ECG on pre-op ECG. No heart murmur, but potentially a squeaking noise heard during auscultation. Doppler BP today, 110, 108, 120mmHg, normal anxiety.

-Abnormal PE/Chem/CBC/UA Results: Chem 10 showed glob 4.9, otherwise unremarkable.

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

Normal cardiac silhouette. No obvious evidence of CHF.

ELECTROCARDIOGRAPHIC FINDINGS

A six lead ECG is available at 25mm/s; 10mm/mV. The average heart rate is 150bpm (range 71-166bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P wave morphology is positive with a normal dimension. Normal PR. Tall R waves. The QRS morphology is variable consistent with a rate dependent bundle branch block. MEA is normal. No premature beats, pauses or other dysrhythmias observed.

ECG diagnosis: Normal sinus rhythm with a rate dependent left bundle branch block.

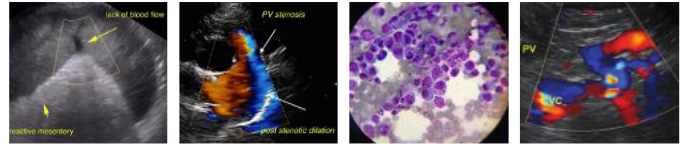
ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild thickening of the mitral valve leaflets with no prolapse into the left atrial lumen. Trivial central mitral regurgitation with a normal left atrial dimension. Normal LV diameter with adequate myocardial function. The tricuspid valve appears mildly thickened with mild tricuspid regurgitation. TR velocity consistent with early pulmonary hypertension. 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 obvious aortic 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	NA	3.0	1.4	1.2	48	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	1.3	1.2	4.0	1.6	2.1	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)

Adapted from June Boon, Veterinary Echocardiography, 1998



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Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435	30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
Hansson et al, Vet Rad and Ultrasound 2002	35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995	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)

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overtly normal cardiac dimensions and function, with no obvious dysfunction or dilation of the left heart. Mild TR with mild pulmonary hypertension is identified which should be monitored going forward in this predisposed breed. That being said, in a dog without reported respiratory signs this is subclinical and an incidental finding. No significant valvular leaks are visualized, and systolic function is adequate.

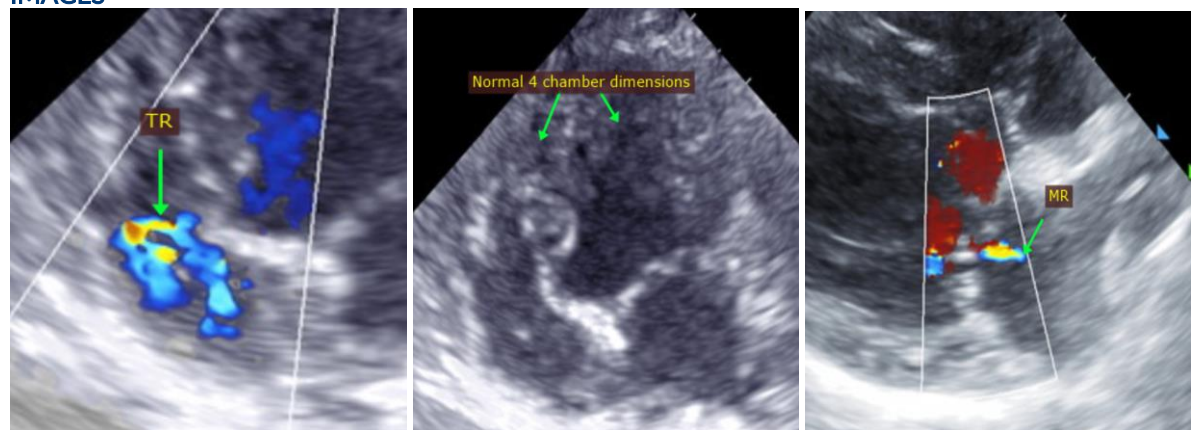
The ECG shows a respiratory sinus arrhythmia consistent with high vagal tone. There is also a rate-dependent bundle branch block which is a benign conduction abnormality that will cause variation in QRS morphology depending on heart rate. No arrhythmias are noted on the ECG.

Based upon what is seen here, there is no cardiac contraindication for general anesthesia. Consider pre-medicate with a vagolytic due to presumably high vagal tone. Additionally, pre-oxygenating for 5-10 minutes is recommended. No additional restrictions are necessary.

Monitor for development of a heart murmur, cough, labored breathing, exercise intolerance or collapse episodes.

A recheck echocardiogram is recommended in 1 year, sooner if signs of cardiac compromise or a significant murmur develop in the interim.

IMAGES





PATIENT

Shadow Saddoris

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 Mix

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

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