


PATIENT PRESENTING CLINICAL SIGNS

Lola Parikh History: Pre-anesthesia screen. Previous 2nd degree heart block that responded to atropine test (2018).

SPECIES ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

Canine A single lead ECG is available; 50mm/s, 20mm/mV. The average heart rate is 150bpm (range 120-188bpm). P waves cannot be identified throughout; however, this is likely due to device insensitivity. The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P and QRS morphologies are positive. Three brief sinus pauses are identified. AV block is suspected given the history; however, blocked P wave cannot be visualized. No ectopic beats or other dysrhythmias observed.

BREED

Shih Tzu

SEX

Female Spayed

ECG diagnosis: Normal sinus rhythm with respiratory variation. Brief sinus pauses; suspect 2nd degree AV block.

AGE ECHOCARDIOGRAM FINDINGS

14 years 2D, m-mode and doppler imaging is available. Diffuse thickening of mitral valve leaflets with no prolapse into the left atrial lumen. Mild eccentric mitral regurgitation with minimal left atrial dilation. Normal MR velocity. Normal LV diameter with adequate myocardial function. The tricuspid valve appears normal with trivial 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. Trace aortic and no pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

WEIGHT

11.9lbs

INTERPRETED BY

Maggie Machen Lamy,
 DVM DACVIM
 (Cardiology)

CARDIAC CHART
IMAGING PERFORMED BY

Kelly Reschny, RVT

HOSPITAL NAME

East Credit Veterinray
 Hospital

REFERRING VET

Dr. Webster

INVOICE

23939

DATE

4/29/22

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	5.9	NA	1.3	1.36	45	78	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	140	1.8	1.1	5.4	1.8	2.2	1.2
*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



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing mild mitral and trivial tricuspid regurgitation. Lack of significant left atrial enlargement indicates the current risk for complication is low. A small aortic leak is noted, and a baseline blood pressure is recommended. No additional issues such as systolic dysfunction or pulmonary hypertension are noted in this study.

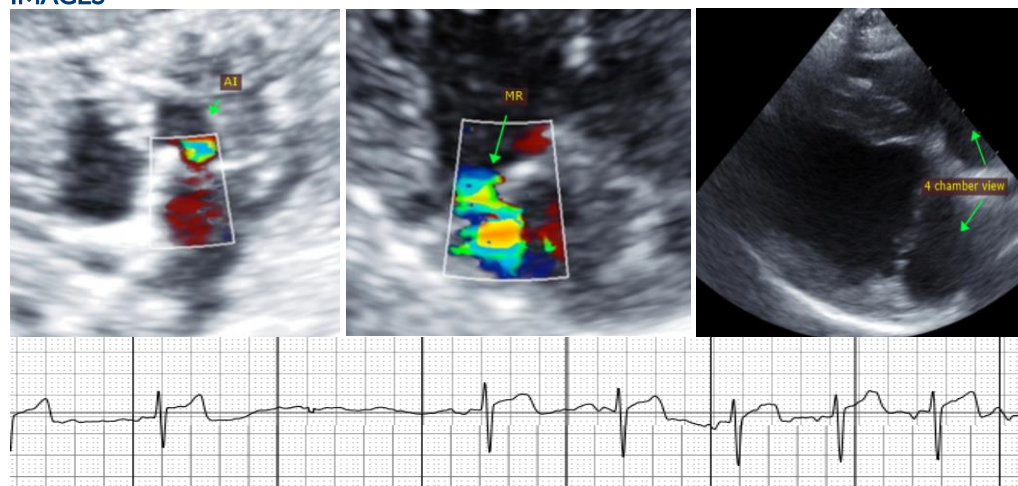
The ECG is largely normal with brief sinus pauses. These are suspected to reflect persistent 2nd degree AV block, as was noted in the history. That being said, this cannot be confirmed on this tracing due to device insensitivity. An atropine challenge should be repeated prior to anesthesia to ensure a normal response prior to proceeding. No maglinant arrhythmias are identified.

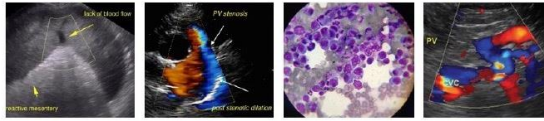
Given these findings, no cardiac medications are clearly indicated. Assessment of progression in the future will help predict long term prognosis, which is highly variable at this stage. Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

Anesthetic risk is considered mild if needed. **Pre-medicate with atropine to ensure an exuberant response prior to proceeding.** Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Mild IV fluid restriction is recommended to avoid fluid overload.

Recommend conservative monitoring with a recheck echocardiogram in 6-12 months, sooner if any development of clinical signs.

IMAGES





PATIENT

Lola Parikh

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

Shih Tzu

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