


PATIENT

 Buddy Rebel Dog
 Rescue

PRESENTING CLINICAL SIGNS

History: Grade 4/6 heart murmur. Assess prior to anesthesia.

SPECIES

Canine

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Normal mitral valve leaflets with no obvious prolapse into the left atrial lumen. No obvious mitral regurgitation. Normal left atrial dimension. Normal LV diameter with normal myocardial function. The LV wall appears normal. The tricuspid valve appears mildly elongated with trace insufficiency seen. Moderate right atrial dilation. Mild right ventricular hypertrophy and remodeling indicative of pressure overload. Mild right ventricular dilation. Pulmonic outflow velocities are elevated at the level of the valve; >5.3m/s (max PG 100mmHg). The pulmonic valve is difficult to visualize, although a tethered thickened is noted. There is mild post-stenotic dilation of the main pulmonary artery and branches. Mild pulmonic insufficiency. The aortic valve appears to have normal morphology and mobility. No obvious cardiac shunts are present. No pericardial or pleural effusion noted.

BREED

American Bulldog Mix

SEX

Male Neutered

AGE

4 years

CARDIAC CHART
WEIGHT

112.4lbs

INTERPRETED BY

 Maggie Machen Lamy,
 DVM DACVIM
 (Cardiology)

IMAGING
PERFORMED BY

Kelly Reschny, RVT

HOSPITAL NAME

 St Catherines Animal
 Hospital

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	NM	1.2	1.2	60	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	150	2.0	5.3	51.0	2.5	3.7	1.5
*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

The cause of the murmur is severe valvular pulmonic stenosis. The degree of obstruction is severe based upon the velocity/pressure gradient across the pulmonic valve and the secondary hypertrophy and remodeling of the right ventricle. There is mild to moderate RA dilation and trace TR with mild tricuspid valve thickening (likely dysplasia). The risk for CHF in the future is elevated and will likely limit lifespan. No other congenital abnormalities were visualized, however small shunts or defects can be difficult to identify without a sedated bubble study in patients this young.

REFERRING VET

Dr. Boctor

INVOICE

24849

DATE

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Referral for balloon valvuloplasty should be considered in this patient as the gold standard therapeutic option for this condition and may improve long term outcome and delay onset of clinical signs (including exertional syncope and right-sided congestive heart failure). If surgery is not elected, this patient's condition will likely limit lifespan, with many severe PS cases developing CHF by mid-life. Regardless, medical management with atenolol is recommended to decrease heart rate and lessen the obstruction as below. Monitor for development of associated clinical signs (collapse, abdominal distention, cough, labored breathing). **Mild exercise restriction is advised.**

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Anesthetic risk is mild to moderate at this time. **Avoid heart rate stimulating drugs such as atropine or glycopyrrolate unless absolutely necessary.** Avoid vasodilators such as acepromazine. Mild IV fluid restriction is advised. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction and recover in O2 if possible. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary.

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PLAN

Institute atenolol to effect: 25mg tabs, ¼ tab PO BID to start (up-titrate to desired effect). Goal is to suppress heart rate <120-140bpm even with stress/activity. Baseline chest radiographs and ECG are recommended. Referral for balloon valvuloplasty ASAP if desired.

WEIGHT

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If surgery is declined, recommend recheck echocardiogram in 6 months to assess for progression, response to medication.

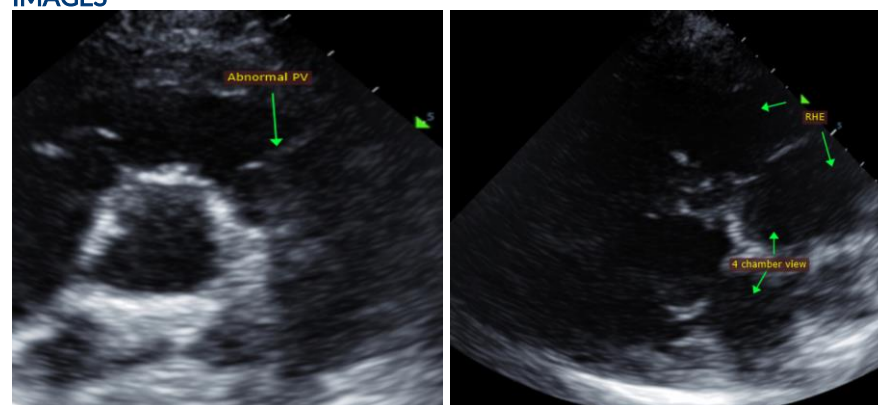
INTERPRETED BY

Maggie Machen Lamy,
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(Cardiology)

IMAGES

IMAGING PERFORMED BY

Kelly Reschny, RVT



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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.

INVOICE

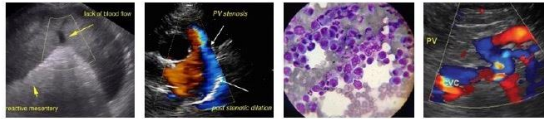
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Thank you for this referral. This report was generated using transcription software, and minor dictation errors may be present. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

DATE

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