



PATIENT PRESENTING CLINICAL SIGNS

Shirley Kelly History: BP 162 avg - here for BP due to proteinuria and elevated LFTs. Due for echo, O req echo done today.

SPECIES Mild BOAS, otherwise no concerns. BP done under PVP premed today.

Canine

BREED

Boston Terrier

Abnormal PE/Chem/CBC/UA Results: Lab Results Comparison: - March 3rd results: - ALT: 139 U/L - GGT: 21 U/L - Urine protein: creatinine ratio: 1.8 - March 23rd/24th recheck results: - ALT: 140 U/L (stable, mildly elevated) - GGT: 25 U/L (slightly increased from prior) - UPCR: 1.6 (decreased from prior but still elevated) - Other liver enzymes normal: AST, alkaline phosphatase, bilirubin all wnl - Kidney values wnl Hx: - December echocardiogram: BP 140-160 mmHg over 8 readings, mild cardiac disease (MV) - Annual Lyme testing negative Ddx: - Hypertension secondary to cardiac disease progression - Lepto - Lyme - Primary liver disease (less likely given normal AST, alkaline phosphatase, and bilirubin) - Abd dz

SEX

Female Spayed

AGE

10

WEIGHT

14.8 lbs

INTERPRETED BY

**Sara Brethel, DVM
DACVIM**

IMAGING PERFORMED BY

Sorbo

HOSPITAL NAME

JM Pet Resort & VC

REFERRING VET

Sorbo

INVOICE

23000

DATE

5-7-26

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (M-Mode)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	Roughly 5.0	Underest	NM	NM	-	-	NM
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LAD LA MAX 4 Chamber	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				
PATIENT	NM	Roughly 1.5	Roughly 1.0	6.72	2.4	2.15	-

RAD: 2.7

ECG during echo:

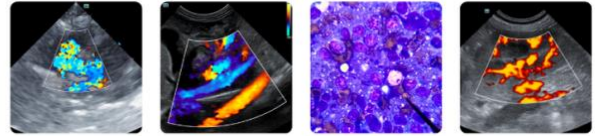
Negative P waves. Negative QRS complex.

Cardiac Presentation

There is mild mitral valve thickening with mild mitral regurgitation. There does not appear to be prolapse of the mitral valve leaflets. On long access assessment, the left atrial size is appears normal. Subjectively, left ventricular diastolic and systolic function appears normal. However, measurements are unable to corroborate systolic function. There is mild right atrial enlargement with evidence of tricuspid regurgitation. Subjectively, the right ventricle appears normal in function. The aortic and pulmonic valves are difficult to visualize. With what is visible, they appear to be normal. The aorta appears to be normal. There is no evidence of pleural effusion, pericardial effusion, or intracardiac masses.

ULTRASONOGRAPHIC FINDINGS

- Degenerative valve disease suspect ACVIM Stage B1 Mitral
- Mild right atrial enlargement and tricuspid regurgitation
- Mitral regurgitation



PATIENT **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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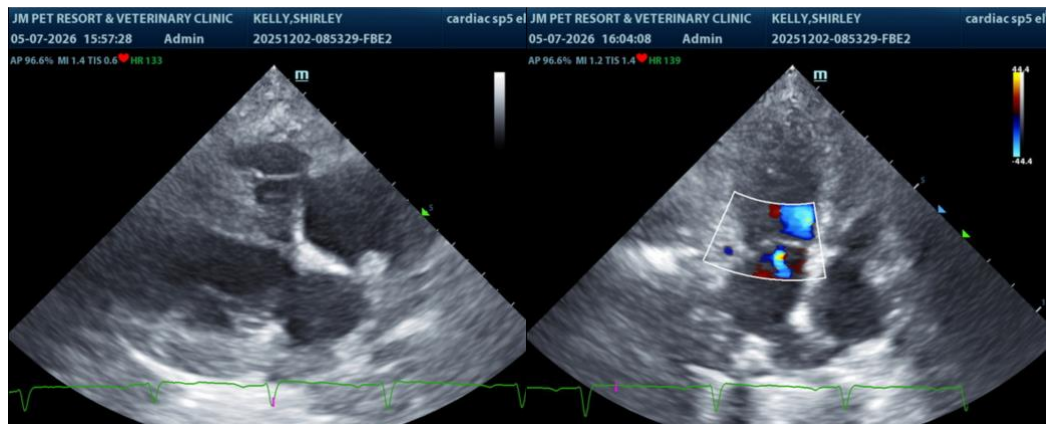
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There is evidence of degenerative valve disease. The image acquisition was reportedly technically difficult. Based upon the images provided, it does not appear that cardiac therapies are recommended at this time. Close monitoring is recommended. I would consider referral for this patient due to the difficulty in obtaining images to ensure no other cardiac therapies or conditions are identified based upon echo. Chest radiographs can be helpful, however also technically difficult in patients such as Bostons especially with their body conformation. If not moving forward with referral, I would do an echo in 4-6 months (sooner if murmur is worsening or other cardiovascular clinical signs are developing).



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

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

Sara Brethel DVM, DACVIM (Cardiology)

info@SonoPath.com