SonoPath
FOSTERING THE ART OF VETERINARY MEDICINE™

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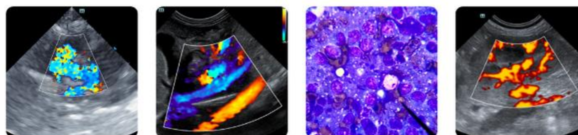


Clinical Sonography & Telecytology
Educational Teleconsultation Services™

PATIENT

Shirley Kelly

SPECIES

Canine

BREED

Boston Terrier

SEX

FS

AGE

10 years

WEIGHT

15.6 lbs.

INTERPRETED BY

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY

Sorbo

HOSPITAL NAME

JM Pet Resort & VC

REFERRING VET

Sorbo

INVOICE

10391

DATE

12/2/25

PRESENTING CLINICAL SIGNS

Historical murmur. Sneezing, rhinorrhea. Signs of upper respiratory infection. Xrays decl.

Abnormal PE/Chem/CBC/UA Results: *BP 140-160mmHg over 8 reads (initial reads higher, suspect mild stress). *Lung sounds slightly increased dorsally in lung fields, upper respiratory sounds radiating to lung. *Grade IV/VI murmur PMI LHB.

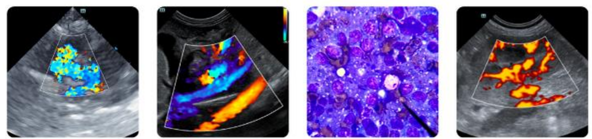
ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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			1.4		40	78	0.2

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	1.5	0.9		2.4	2.6	

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size and structure. Chamber volume and blood echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented mild thickening, consistent with endocardiosis with adequate extension in systole and union in diastole. Mild centralized to eccentric MR was noted on Doppler. The **left ventricle** presented normal free wall and septal thicknesses with mild alinear contour. The **myocardium** presented mild echogenic remodeling consistent with age-related myocardial change. **Contractility** of the ventricular walls was adequate and in normal range for this breed and patient size. The **left ventricular outflow** tract demonstrated normal laminar flow with subjectively unremarkable structure. Subjective assessment of the **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated mild thickening with mild TR on Doppler (measured TR velocity ~2.2 m/s). No evidence of masses. The **right ventricle** was of normal size (1/3 diameter of LV), echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). No overt **pericardial** or visible free pleural fluid was noted. The pericardial and mediastinal regions were free of overt masses in the visible window.



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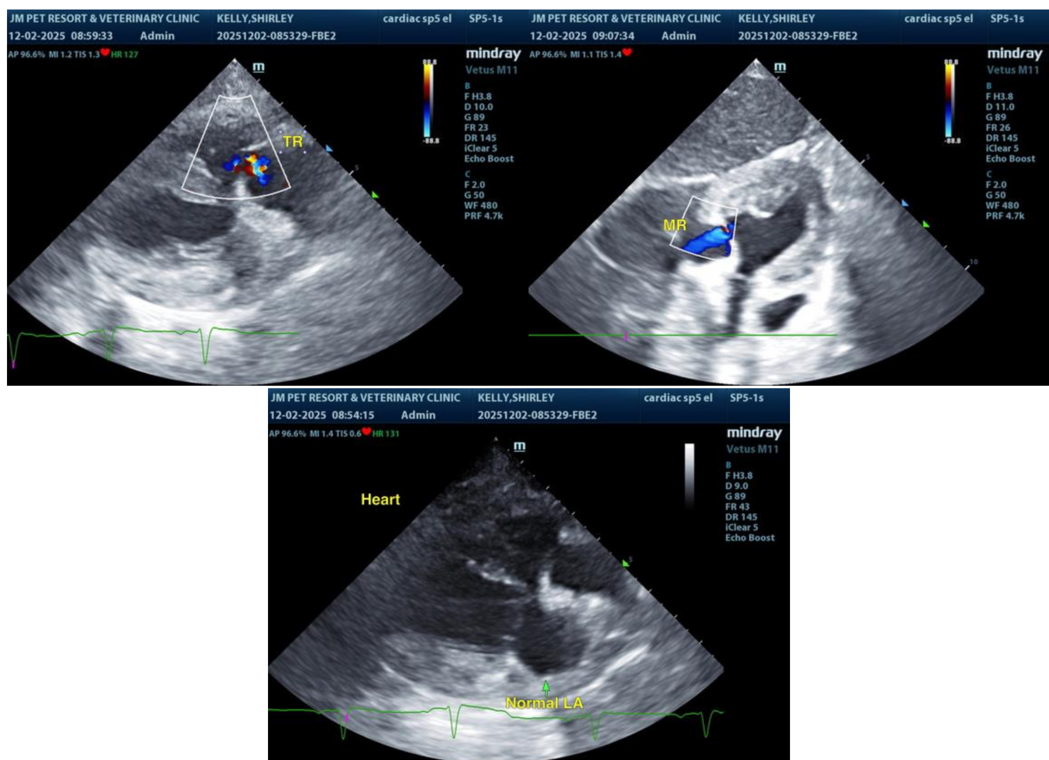
ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease with mild myocardial remodeling (B1)
- TV insufficiency - estimated pulmonary pressure gradient not consistent with clinical pulmonary hypertension

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The lack of LA enlargement or left heart volume overload indicates that the current and future risk of complications secondary to MR at this stage is low. Without evidence of left-sided congestion or clinical pulmonary hypertension, the respiratory signs in this patient are non-cardiogenic in origin. There is no overt indication for cardiac medications. Prognosis is considered variable and sonographic monitoring is advised. Recheck echocardiogram is recommended in 6 months, sooner if clinical signs consistent with cardiac disease arise. Current cardiac anesthetic risk is considered mild.

Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.



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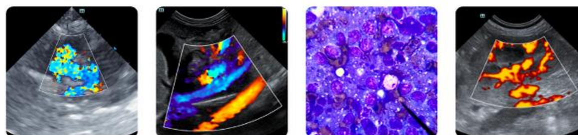

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine/Feline Practice)
info@sonopath.com