



PATIENT

Remi George

SPECIES

Canine

BREED

Golden Retriever

SEX

Intact Female

AGE

6 months

WEIGHT

54 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Kim Liedberg

HOSPITAL NAME

SVS Imaging WI

REFERRING VET

Dr Chughtai,
American Vet Hosp

INVOICE

13045

DATE

1/12/22

PRESENTING CLINICAL SIGNS

3/6 heart murmur noted at puppy exam. This pup has been adopted from Wolf Gang rescue.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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	4.6	--	--	1.3	42.9	77.3	0.33
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	143	4.7	0.93	--	3.2	3.5	--

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 2 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented potential for subtle thickening, yet primarily maintained linear structure with normal union in diastole. Color doppler assessment revealed eccentric mitral valve insufficiency. The **left ventricle** presented subtle subjective increased thickness with maintained linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The **left ventricular outflow** tract demonstrated turbulent to dynamic systolic flow. Aortic valve insufficiency was present. The **right atrium** and auricle revealed normal size, structure and content. **Tricuspid** valvular assessment demonstrated subjective adequate linear morphology and kinesis with minor insufficiency on color doppler assessment. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Severe aortic stenosis



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- Eccentric MR - potential for concurrent minor MV dysplasia
- Trace TR - estimated pulmonary pressure gradient not consistent with clinical pulmonary hypertension

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The severely elevated LVOT outflow velocity combined with aortic valve insufficiency is consistent with severe aortic stenosis based on estimated pressure gradient. The potential for very early to subtle LV changes was noted. However, LV systolic function appears to be normal. No other clinical issues such as systolic dysfunction, overt evidence of additional stenotic disease, or evidence of a shunt were noted. Given the significantly elevated pressure gradient owing to aortic stenosis, long term prognosis remains very guarded.

Ideally, referral to a local cardiologist for further assessment and prognosis is recommended. If possible, Empirically, Atenolol (1.0 mg/kg PO BID), could be considered. In this case, although efficacy of this medication for aortic stenosis has been questioned. Serial sonographic monitoring for evidence of secondary LV changes is recommended, sooner if clinical signs consistent with heart disease arise.

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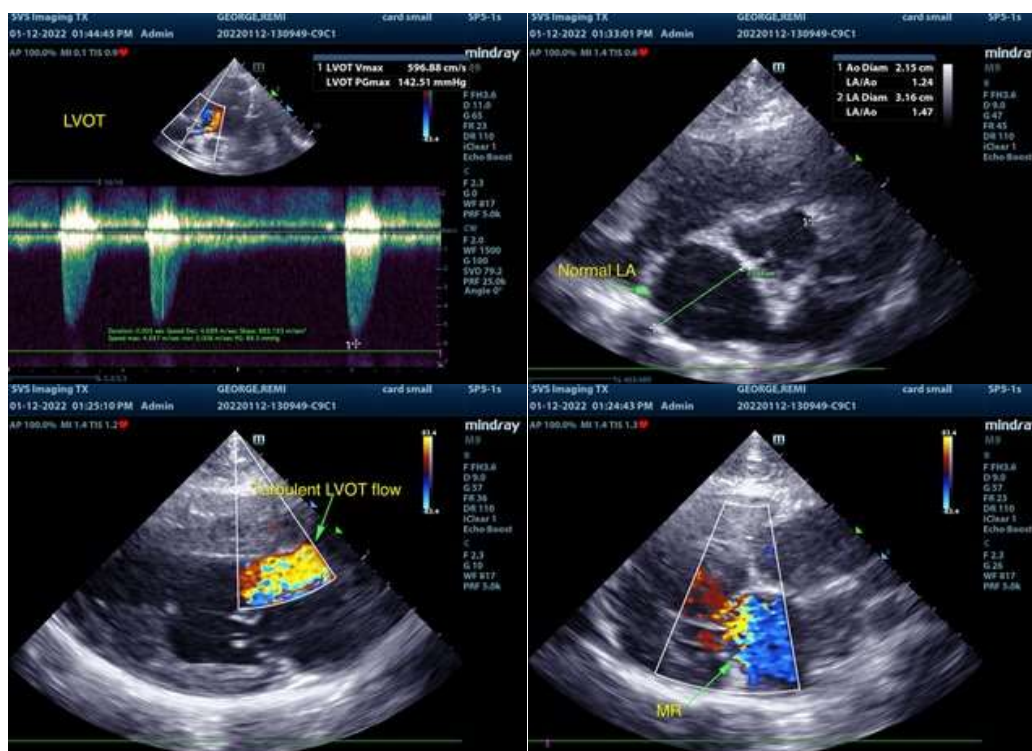
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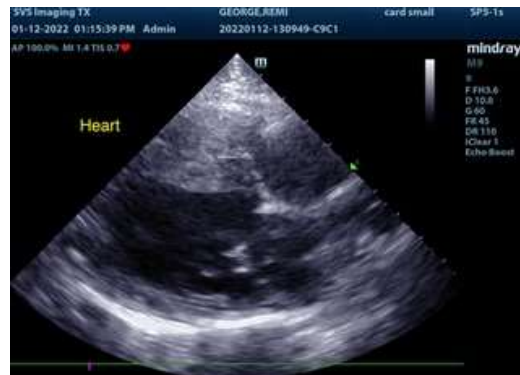
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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