

PATIENT

Hannibal Tief

SPECIES

Canine

BREED

German Shepherd

SEX

Intact Male

AGE

17 Weeks

WEIGHT

43.6 Pounds

INTERPRETED BY

Sara Brethel DVM,
 DACVIM (Cardiology)

IMAGING PERFORMED BY

Kathleen Byrnes

HOSPITAL NAME

AH of Lewisville

REFERRING VET

Dr. McClure

INVOICE

35959

DATE

2/24/26

PRESENTING CLINICAL SIGNS

History: P presented for echo due to murmur

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	4.49	--	1.07	1.33	33.93	--	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	112	4.49	1.26	19.8	4.0	3.3	2.2

IVSd: 0.86m LVPWD: 0.94

Cardiac Presentation

The mitral valve leaflets are mildly thickened and there is mild mitral regurgitation. There is no prolapse of mitral valve leaflets. The left atrial size is normal. Left ventricular systolic and diastolic function is preserved. The left ventricular myocardium appears mildly hyperechoic. Left ventricular walls measure at the upper limits of normal. There is normal right atrial size without evidence of tricuspid regurgitation. There is no prolapse of tricuspid valve leaflets. There is no evidence of pulmonary hypertension. Subjectively, the right ventricle appears normal in structure and function. The pulmonic valves have normal morphology and normal corresponding outflow velocities. There is trace pulmonic insufficiency. There is evidence of an increased band of tissue within the left ventricular outflow tract, and left ventricular outflow tract velocities are severely increased. There is mild to moderate aortic insufficiency. The aortic valve appears tri-leaflet. The pulmonary artery and associated branches appear normal. There is no evidence of pleural effusion, pericardial effusion, or intracardiac masses.

ULTRASONOGRAPHIC FINDINGS

- Severe subaortic stenosis
- Normal left atrial size
- Hyperechoic left ventricular myocardium with left ventricular measurements being at the upper limits of normal



PATIENT

- Mild mitral valve thickening and mitral regurgitation

Hannibal Tief

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

SPECIES

The patient has severe subaortic stenosis. Given the patient's age, this is a unique condition that will worsen until the patient is full grown. There is no surgery for correction. Unfortunately, with this disease only salvage procedures exist. I would recommend starting atenolol at incremental doses, increasing a quarter mg/kg every three to four days, until an optimal dose of mg/kg twice a day is reached. The client should weigh the patient every one to two weeks. As the patient gains weight, the dose will need to be adjusted. This will likely be lifelong. A recheck exam is recommended in 6-9 months, sooner if clinical signs are developing. Unfortunately, given the severity of the disease, this patient may have a limited lifespan and is at risk of passing away suddenly. There is an increased risk for endocarditis as well. Anytime bacteremia or surgery is scheduled, prophylactic antibiotics with cephalexin versus clavamox should be given 3-5 days prior, perioperatively, and three to five days postoperatively. The mild mitral valve thickening and mitral regurgitation likely represent a form of mitral valve dysplasia as well.

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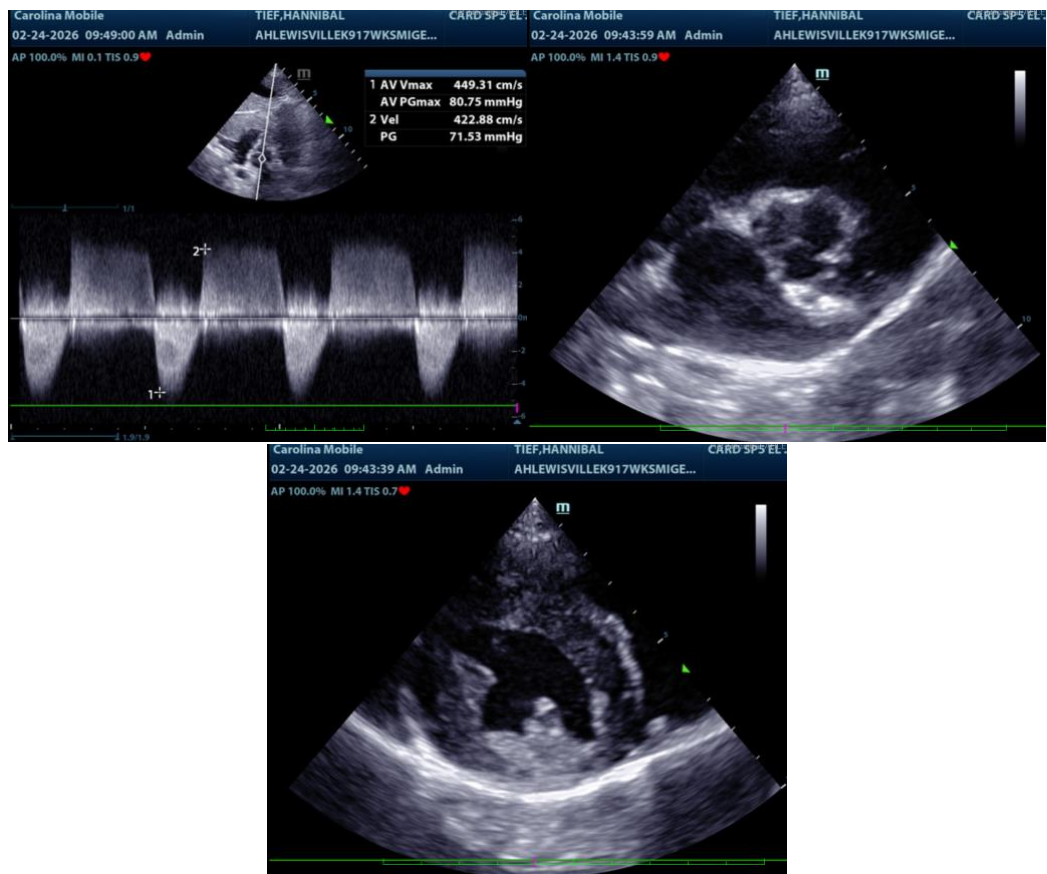
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology



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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)

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