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Clinical Sonography & Telecytology
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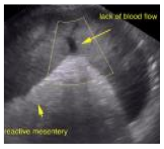
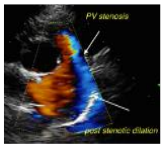
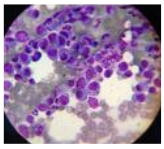
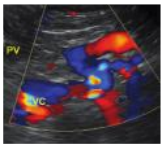

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Elwood Stewart

SPECIES

Canine

BREED

Mixed Breed Canine

SEX

Neutered Male

AGE

13 Years

WEIGHT

66 Lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Ho Ho Kus Vet

REFERRING VET

Dr. Brittany Scott

INVOICE

13412

DATE

1/13/22

PRESENTING CLINICAL SIGNS

History: Elwood initially presented for abdominal ultrasound on 1/3/2022 for 1 month of coughing, drinking more, recently decreased appetite over the last 1-2 weeks. Raspy breathing during PE but normal effort severe weight loss- 20lbs in the last year BUN 7, Na/K 27, T4 0.9, USG 1.018 Chest rads--> diaphragmatic hernia according to radiologist. Patient presents today for FNA of the liver. Following FNA, an abnormal / missing "P" wave was observed intermittently on EKG strip). An Echo was performed.

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	--	<2.0	NM	1.3	31	62.4	0.1
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				
PATIENT	115	1.3	0.8	--	3.8	2.9	--

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 minor irregular age-related changes that are not clinically significant at this time with adequate extension in systole and union in diastole. The **left ventricle** presented normal free wall and septal thicknesses with linear contour. The **myocardium** presented some echogenic remodeling consistent with expected age-related 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 minor subjective thickening with mild insufficiency present on color doppler assessment. The **right ventricle** was of overall normal size (1/3 diameter of LV), echogenicity with potential focal to unspecified mildly echogenic myocardial thickening in the area of the right atrioventricular groove, measuring approximately 1.8 cm x 1.2 cm. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). No dilation due to heartworm disease, cuor pulmonale, stenosis, or pulmonic hypertension was noted. No visible **pericardial** or free pleural fluid was noted. The **mediastinum** was free of masses in the visible window. No evidence of significant arrhythmogenic activity.

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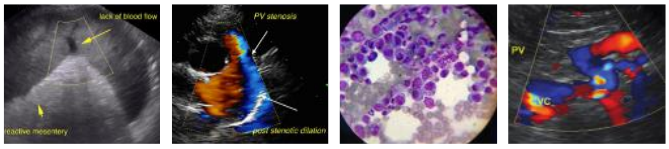

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ULTRASONOGRAPHIC FINDINGS

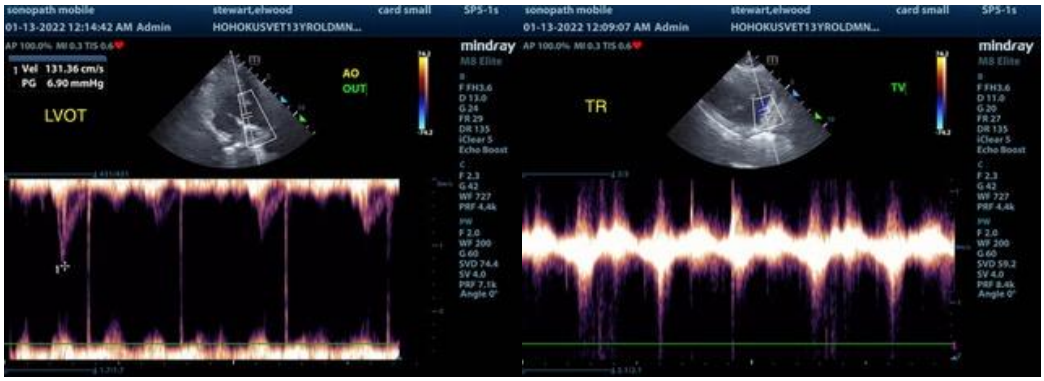
- Overtly normal cardiac structure and function for age
- Mild TR- estimated pulmonary pressure gradient not consistent with clinical pulmonary hypertension
- Possible mild yet unspecified echogenic myocardial thickening in the area of the right atrioventricular groove

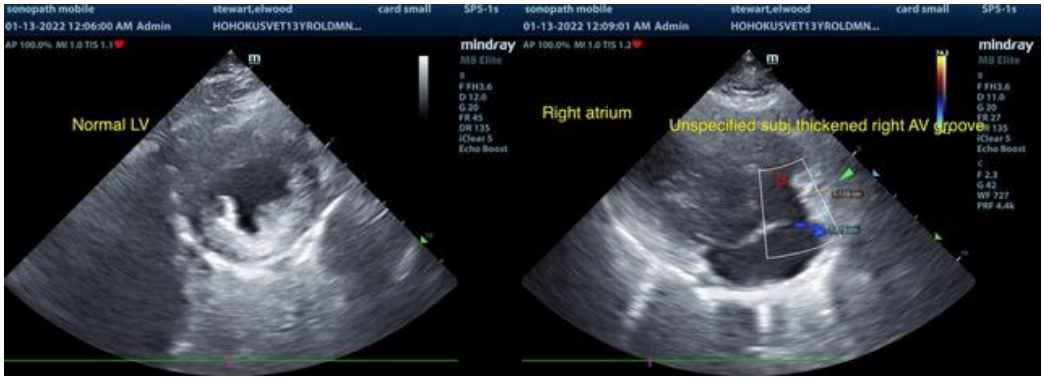
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overall, no evidence of significant structural or functional cardiomyopathy or evidence of significant arrhythmogenic disease. Technically, the LV systolic function was mild subnormal yet likely adequate given the age of the patient with some degree of minor decreased LV systolic function, potentially owing to anesthesia. No overt echocardiographic evidence of impending decompensation. The possible mildly echogenic myocardial thickening in the area of the right atrioventricular groove is nonspecific and may be incidental or owing to focal age-related myocardial changes. This area of thickening is not overtly consistent with neoplastic criteria yet ideally, echocardiographic monitoring of this area for evidence of progression is recommended. No indication for cardiac medications. Based on overall cardiac presentation, anesthetic risk is considered low in this patient.

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.

https://www.antechdiagnostics.com/cadet-braf





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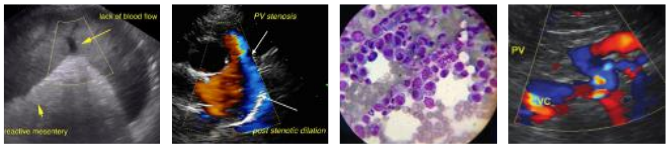

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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