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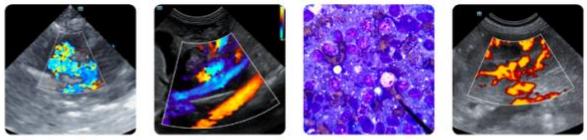


Clinical Sonography & Telecytology
Educational Teleconsultation Services™

PATIENT

Harper Klinzing

SPECIES

Canine

BREED

Wheaten Terrier

SEX

Spayed Female

AGE

12 Years

WEIGHT

39.2 lbs

INTERPRETED BY

Bradley Harris, DVM, DACVECC, DACVIM (cardiology)

IMAGING PERFORMED BY

Kathleen Byrnes

HOSPITAL NAME

Monroe Road Animal Hospital

REFERRING VET

Dr. Widay

INVOICE

15948

DATE

05/08/26

PRESENTING CLINICAL SIGNS

P presented for echo due to new murmur and elevated proBNP 1442. No clinical signs at home

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

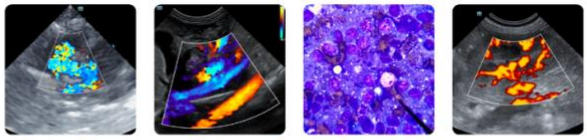
CANINE CARDIAC PARAMETERS	BW	HR BPM	LAD 4 ch Long	RAD 4 ch Long	La/Ao Heart Base	LVIDd	LVIDs
NORMAL PARAMETER		50-100			<1.6		
PATIENT	17.82	140	3.93	3.04	1.21	3.98	2.29
CANINE CARDIAC PARAMETERS	**FS**	**EPSS**	**PV V MAX (m/s)**	**AV V Max (m/sec)**	**MR Vmax**	**TR Vmax**	**RPA distensibility (normal >30%)**
NORMAL PARAMETER	28-40	<0.6	0.7-1.6	0.7-1.7	4.5-5.5	< 2.7	
PATIENT	42	0.3	1.0	1.3	6.0	2.7	NM

Cardiac Presentation

The left atrium is upper limits of normal in dimension. The left ventricle is normal in dimension, with normal systolic function. The right atrium and ventricle are normal in dimension, with normal systolic function. The anterior and posterior mitral valve leaflets are thickened and redundant consistent with myxomatous changes, and there is mild prolapse. There is mild to moderate mitral regurgitation identified. The tricuspid valve leaflets are appropriately thin with adequate apposition, intact chordae, with mild tricuspid regurgitation and no evidence of pulmonary hypertension. The left ventricular outflow tract demonstrated normal laminar flow, and the visible aorta is unremarkable. The right ventricular outflow tract assessment revealed normal laminar flow, with appropriate main pulmonary artery diameter and right pulmonary artery distensibility. There is no pulmonic and no aortic valve insufficiency identified. There is scant pericardial effusion, but no pleural or free peritoneal fluid documented. No evidence of hepatic venous congestion is noted. The cardiac chambers, pericardial and visible extra-cardiac regions were free of masses, spontaneous echo contrast, or thrombi.

ULTRASONOGRAPHIC FINDINGS

- These findings identify scant pericardial effusion in the absence of any obvious mass lesion. Given the absence of any identifiable neoplasia, idiopathic disease or coagulopathy is a possibility. However, the inability to document a mass does not exclude the potential for neoplastic effusion. The presence of mild mitral regurgitation in the setting of a normal left side are consistent with degenerative/myxomatous mitral valve disease with minimal to mild hemodynamic effects (ACVIM Stage B1 disease).



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given these findings, no specific cardiac therapy is recommended. An abdominal ultrasound is recommended to evaluate the abdomen for a potential cause of the effusion. If clinically feasible given the small volume of fluid, the fluid should ideally be submitted for cytology to help identify the presence of neoplasia. If the effusion is idiopathic in origin, surgery may be curative. However, the added value of surgery is to better evaluate the heart base to identify mass lesions that can be missed by ultrasound. If surgery is being considered, an abdominal ultrasound is recommended to evaluate for potential mass lesions.

Anesthesia considerations:

Anesthesia should be avoided until any signs of CHF and/or pericardial effusion have resolved. If anesthesia is necessary after that time, then alpha-2 agonists, ketamine, high dose acepromazine, and Telazol should be avoided. Skip any ACE-inhibitor (if receiving) on morning of anesthesia. Fluid therapy during anesthesia should be considered at a reduced rate (e.g., 2-3 ml/kg/hour) if possible (i.e., if not hypotensive). A shorter anesthetic duration will reduce the risk of complications. Pre-oxygenation is advised. Pre-medication with an opioid (e.g., butorphanol, hydromorphone, oxymorphone) with or without a benzodiazepine is generally the safest protocol. An induction agent such as Propofol, Alfaxalone, or diazepam/etomidate can be used to effect. Maintenance of anesthesia with isoflurane or sevoflurane is reasonable.

Diet:

Ensure feeding a grain-inclusive diet if possible. A high-quality food from Hills, Royal Canin, Science Diet, Eukanuba, Iams, or Purina that is highly palatable with adequate protein and calories for maintaining optimal body condition with mild dietary sodium restriction (<100 mg/100 kcal) is recommended. Consider omega-3 fatty acid supplementation. I would avoid any grain-free diets and ensure the patient is not currently receiving a grain-free diet.

Note that these recommendations are guidelines, and must be correlated with the history, physical examination findings, and diagnostic test results. The recommendations may need to be altered as the clinical status of the patient changes.

Activity:

Avoid strenuous activity.

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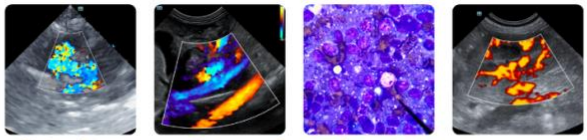

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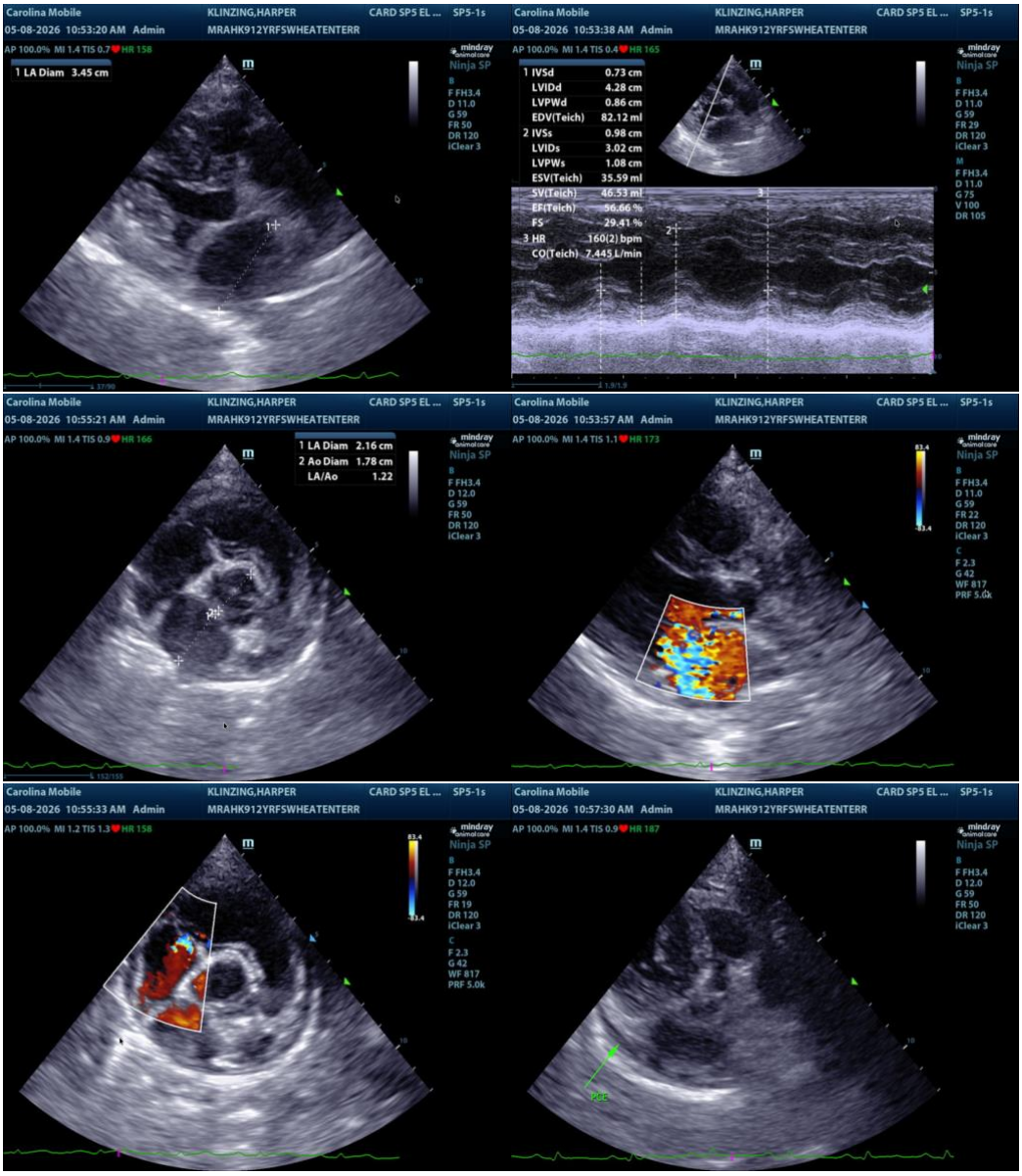

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Bradley Harris, DVM, DACVECC, DACVIM (cardiology)

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