



PATIENT PRESENTING CLINICAL SIGNS

Kipper Mason

SPECIES

Canine

BREED

Pomeranian Cross

SEX

Neutered male

AGE

6 years

WEIGHT

4.1 kg

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Kaitlyn Varga

HOSPITAL NAME

Shuswap VC

REFERRING VET

Dr. Stevenson

INVOICE

99986

DATE

4/27/22

History: New murmur noted on pre-dental exam. No murmur noted

Abnormal PE/Chem/CBC/UA Results: Initial Presenting Complaint COHAT Significant/ relevant exam findings: newly developed grade 3/6 holosystolic murmur, PMI on left heard at COHAT admit (was not present at annual exam in feb) otherwise NSF relating to cardiac dz on PE Lab work performed: Y Date: feb 8/21 Findings: no significant findings (had prev elevated liver values on bloodwork in june but those were normal on this set of labwork) Radiographs: Y - three view chew rads with overread Date: 04/11/22 Lungs: There is a mild, diffuse, mixed bronchointerstitial pattern. Heart: On the lateral views, there is possible mild straightening of the caudal cardiac waist, although the intrathoracic trachea does not appear to be deviated dorsally. The cardiac silhouette is normal in size with no specific cardiac chamber enlargement. The VHS is mildly elevated at 10.8 (normal 8.7-10.7). Vasculature: Normal. Trachea: Normal. Mediastinum: Normal. Diaphragm: Normal. Pleural space: Normal. Musculoskeletal structures: Normal. Other findings: The caudal margins of the liver are slightly rounded, although no displacement of the gastric axis is seen. There is a large amount of fecal material in the descending colon. No other abnormalities are seen in the visible abdomen. Opinion & Recommendation Possible mild left atrial enlargement on the lateral views as well as mildly elevated vertebral heart score. Normal appearing cardiac silhouette on the ventrodorsal view with no cardiomegaly or specific cardiac chamber enlargement. Mild, diffuse bronchointerstitial pattern. No pulmonary metastases or other intrathoracic abnormalities are detected. Borderline generalized hepatomegaly. In combination with the reported heart murmur, the mild cardiac changes are most likely due to mitral valvular insufficiency. There is no evidence of congestive heart failure. The mild uncl interstitial pattern could be normal for the patient in the absence of respiratory symptoms such as coughing. Allergic lower airway disease (chronic bronchitis), infectious etiologies or parasitic infestation are less likely, although clinical correlation is suggested. The size of the liver is likely normal for the patient in the absence of caudal displacement of the gastric axis. Other differentials including a nonspecific hepatopathy, hepatitis, benign hyperplasia or, much less likely, neoplastic infiltration are not excluded, although correlation with bloodwork may be of benefit. Assessment - MILD CARDIAC ENLARGEMENT ON RADIOGRAPHS MILD DIFFUSE BRONCHOINTERSTIT PATTERNS - normal vs. pathologic (bronchitis/infection/parasites) POSS HEPTOMEGALLY - although radiologist did say could be normal for this patient Current Medications: prednisone 5 mg tabs - 1/8 tab daily ongoing (for atypical Addison's)

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. Trivial **mitral** valve insufficiency was noted in this patient with a centralized minor jet. The **left ventricle** presented thicknesses with 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 normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. Trivial **tricuspid** insufficiency was noted and measured 1.5 m/sec. 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.



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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	<1.3	28-40	40-100	<0.6
PATIENT		1.5	1.15	1.4	44	78	NM
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		1.5	1.0	4.1 kg	2.13	2.02	

ULTRASONOGRAPHIC FINDINGS

Minor mitral and tricuspid insufficiency.

No evidence of volume overload.

Stage B1 valvular disease.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

B1: The heart is stable without clinical disease. No overt contraindication for anesthesia of brief to moderate duration. I suggest Torbutrol premed, Propofol induction, Isoflurane maintenance or similar protocol if anesthesia is desired. Blood pressure recommended if not already performed and target white coat negative systolic pressure of < 160 mmHg. If higher than this ACE-inhibitor is suggested to reach this level. Recheck echocardiogram is recommended in 6 months, earlier if murmur grade increases or clinical signs initiate.





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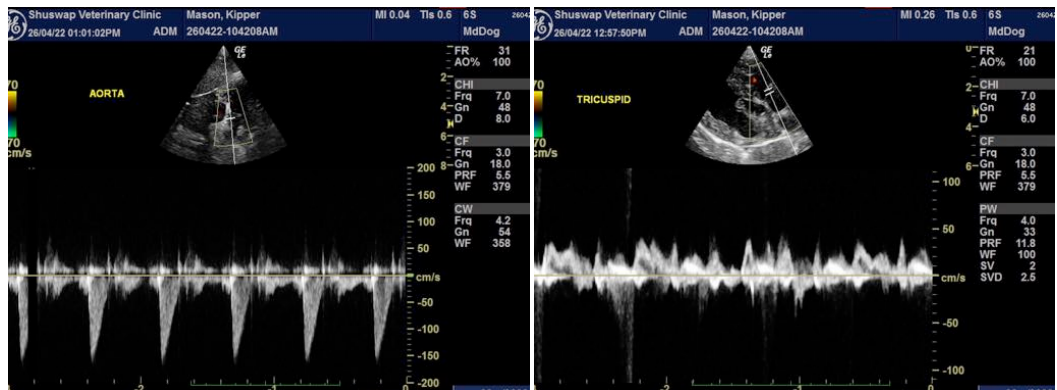
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com



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info@SonoPath.com

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