



PATIENT

Milo McDonald

SPECIES

Canine

BREED

Shih Tzu

SEX

Neutered male

AGE

15 years

WEIGHT

6.8 kg

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Varga

HOSPITAL NAME

Shuswap VC

REFERRING VET

Dr. Varga

INVOICE

42909

DATE

12/6/22

PRESENTING CLINICAL SIGNS

History: Presented for routine evaluation of mass on hind limb, PU/PD and general senior exam. Abnormal PE/Chem/CBC/UA Results: Heart murmur grade 3/6 on exam with irregularly irregular arrhythmia. General cachexia, thinning haircoat, periodontal disease. Senior bloods: Moderate elevation ALP mild hyperkalemia mild hyperchloridemia Mild anemia ECG and thoracic rads overread by cardio: FINDINGS: The VHS measures 10.24. There is mild thoracic rotation. Normal VHS for a Shih - Tzu 8.3-10.7. The cranial cardiac waist is widening and there is evidence of a dilated aortic root. The rest of the pulmonary vasculature appears normal. The trachea is deviated slightly to the right on the VD view however this view is rotated. The trachea initially courses normally but is dorsally deviated at the level of the aortic root. The cranial mediastinum is unremarkable. ASSESSMENT/DIAGNOSTIC RECOMMENDATIONS: With the dilated aortic root, widened cranial cardiac waist and atypical appearance of the trachea a heart based tumor cannot be ruled out. Echocardiography would be recommended for evaluation of that area. A blood pressure is recommended as well to look for signs of systemic hypertension. Blood pressures (oscillometric): blood pressures 189/139, 159/94, 145/88

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. The **left ventricle** presented normal 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. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. 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. A 4.0 cm isoechoic heart base mass was noted in this patient and appeared to be deriving from the aorta. This is most consistent with aortic body tumor. Periodic tachycardia was noted.



PATIENT

Milo McDonald

SPECIES

Canine

BREED

Shih Tzu

SEX

Neutered male

AGE

15 years

WEIGHT

6.8 kg

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Varga

HOSPITAL NAME

Shuswap VC

REFERRING VET

Dr. Varga

INVOICE

42909

DATE

12/6/22

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			1.1		48	83	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	BELOW	BELOW	BELOW	1.34 BELOW
PATIENT				6.8 kg	2.9		

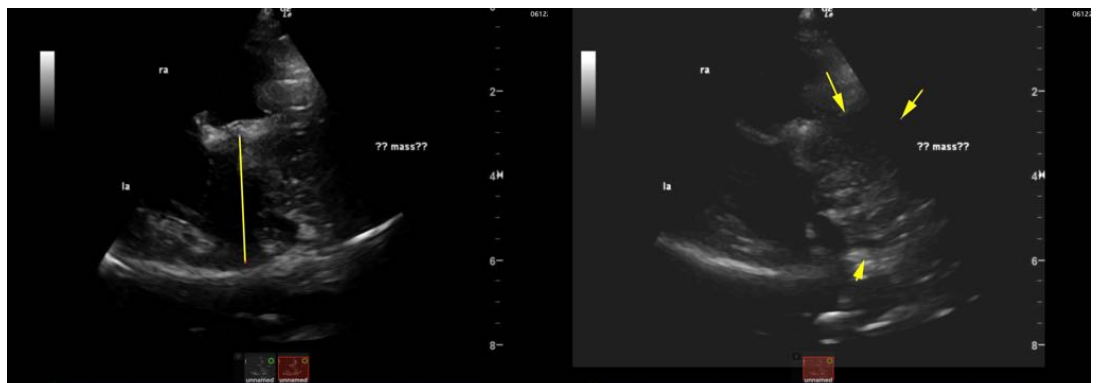
ULTRASONOGRAPHIC FINDINGS

Heart base mass, consistent with aortic body tumor. Fibrosarcoma or similar is also possible. There was no volume overload. However, outflow and inflow issues may be in play.

Arrhythmogenic disease is suspected.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

EKG or Holter monitor is indicated. The cause of the heart murmur is unclear, yet not clinically significant as no volume overload is present. Holter monitor and blood pressure measurements are indicated if not already performed. Control of arrhythmia and any associated hypertension would be appropriate. No other cardiac medications are recommended. Hemangiosarcoma is less likely as the echotexture and position would suggest chemodectoma or fibrosarcoma.





PATIENT

Milo McDonald

SPECIES

Canine

BREED

Shih Tzu

SEX

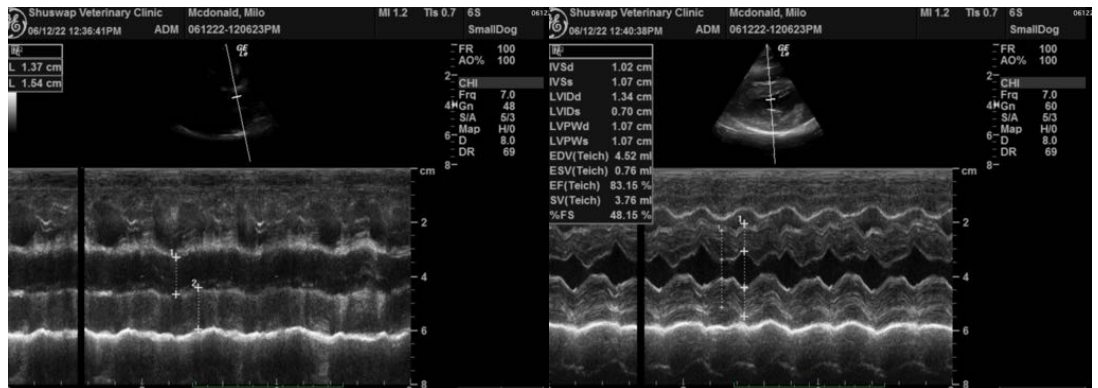
Neutered male

AGE

15 years

WEIGHT

6.8 kg



INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Varga

HOSPITAL NAME

Shuswap VC

REFERRING VET

Dr. Varga

INVOICE

42909

DATE

12/6/22

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
info@SonoPath.com