

PATIENT

Haru Diaz

SPECIES

Canine

BREED

Shiba Inu

SEX

Male Neutered

AGE

10 months

WEIGHT

26lbs

INTERPRETED BY

Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan, RDCS

HOSPITAL NAME

Mass Veterinary Services

REFERRING VET

Dr. Masloski

INVOICE

22233

DATE

12/1/21

PRESENTING CLINICAL SIGNS

History: Haru is referred to evaluate a heart murmur. He is clinically doing well with a good appetite and activity level. Echo prior to anesthesia for neutering. CV/RESP: NSR, grade IV/VI murmur with PMI at apex radiating to right, PSS, lung fields clear. BP: 160mmHg x 3. No medications. *Sedated with propofol for study.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.

Left ventricle: The LV diameter is mildly increased with adequate myocardial function. LV wall thicknesses are normal. A perimembranous ventricular septal defect (VSD) is visualized; the defect is moderate in diameter and measures 0.42cm. The flow is left to right and high velocity; max velocity 4.6m/s.

Left atrium: The left atrium is mildly enlarged (LA/AO falsely elevated due to small aortic root).

Mitral valve: The mitral valve is normal with no mitral regurgitation.

Aortic valve/aorta: The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. No aortic insufficiency.

Right ventricle: The RV appears normal with no evidence of hypertrophy.

Right atrium: Normal RA dimension.

Tricuspid valve: The tricuspid valve appears normal with no tricuspid regurgitation.

Pulmonic valve/pulmonary artery: The pulmonic valve is normal in morphology and mobility. Trace pulmonic insufficiency. Normal RVOT velocity; laminar flow.

Pericardium/other: No pericardial or pleural effusion noted. No obvious cardiac masses.

Heart rhythm: ECG reveals a sinus rhythm with an average HR of 100bpm.

2-Dimensional Measurements

Ao diam (cm)	1.4
LA diam (cm)	2.5
LA:Ao (Swe)	1.8
IVS thickness (cm)	0.76
LVID diastole (cm)	3.3
PW thickness (cm)	0.75
LVID systole (cm)	2.0
FS (%)	39

Doppler Measurements

PV Vmax (m/s)	1.0
AoV Vmax (m/s)	1.6
MR Vmax (m/s)	NA
TR Vmax (m/s)	NA
TR PG (mmHg)	NA

INTERPRETATION OF THE FINDINGS

The cause of a murmur identified is a perimembranous ventricular septal defect (VSD). The defect is moderate in dimension, with high velocity left to right flow. There is mild left heart volume overload at this time, which is concerning in a 10-month-old dog. Lifelong monitoring is advised. Many small congenital shunts are able to live a normal life free of medications however the true hemodynamic consequence cannot be determined prior to assessment over the next year.

Prognosis is guarded.

RECOMMENDATIONS

- No medications are indicated at this time.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.



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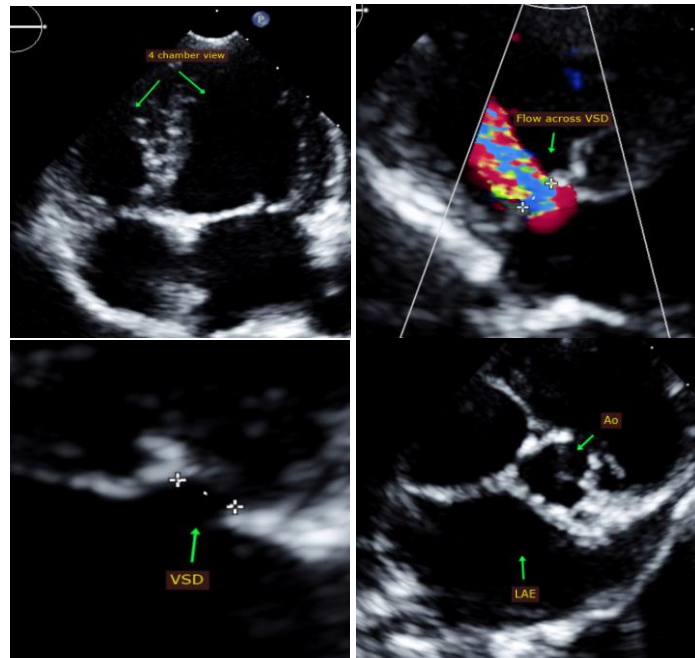
12/1/21

- Anesthetic risk is considered mildly elevated if needed. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Mild IV fluid restriction is recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

PLAN

- Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

IMAGES



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. This report was generated using transcription software, and minor dictation errors may be present. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

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Echocardiogram performed by: Pamela Harrigan, RDCS
Pet Animal Ultrasound Service (4paus.com)