



PATIENT PRESENTING CLINICAL SIGNS

Itachi Salgado History: 1/14/22 a Grade 3/6 mid systolic heart murmur noted on PE. Puppy is bilateral cryptorchid.

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART

Canine

BREED

Siberian Husky

SEX

Intact Male

AGE

3 Months

WEIGHT

21.4 Lbs.

| 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 | -- | -- | 1.3 | 1.3 | 42 | 76 | 0.3 |
| 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 | BELOW |
| PATIENT | 159 | 1.0 | 0.85-1.0 | -- | 2.25 | 2.3 | -- |

Cardiac Presentation

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 thicknesses with linear contour and was not dilated nor restricted with normal left ventricle systolic function. Mild prominent papillary muscle present. 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. Color doppler assessment in the area of the right ventricle. In obliques heart base and heart base views revealed discernable left to right jet in the area of the right ventricle lumen. **Pulmonary outflow** tract assessment revealed normal valve structure, mildly turbulent to dynamic systolic flow with normal diameter (approx.1:1 pa/ao ratio). Normal RV outflow velocity. 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.

ULTRASONOGRAPHIC FINDINGS

- Ventricular septal defect

INTERPRETED BY

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

IMAGING PERFORMED BY

Kim Liedberg

HOSPITAL NAME

SVS Imaging WI

REFERRING VET

Dr. Swanson,
Waukegan PC

INVOICE

13861

DATE

2/9/22



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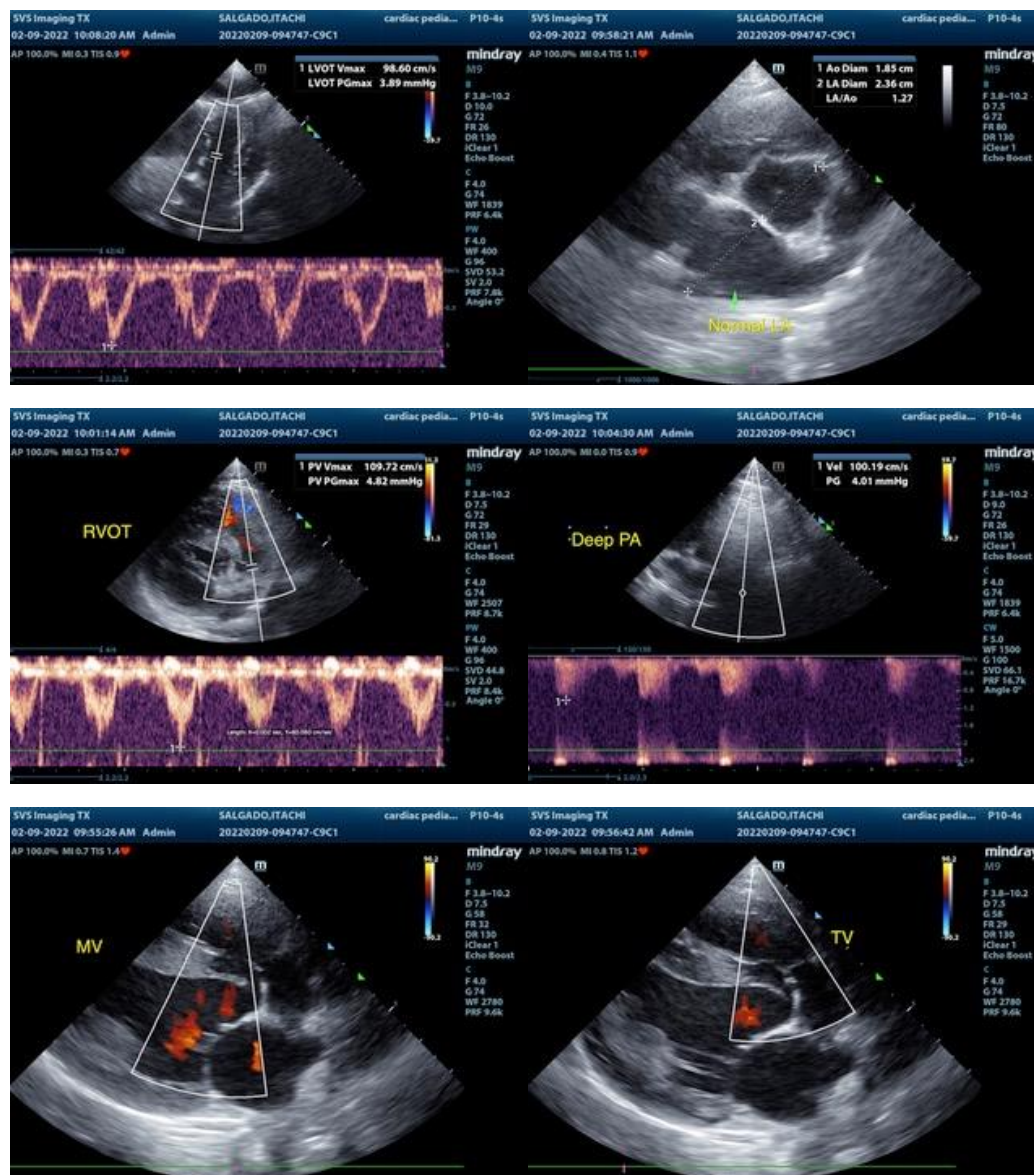
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The study confirms the presence of a ventricular septal defect as the cause of the murmur. Given the lack of left or right heart chamber enlargement as well as normal overall LV systolic function, the hemodynamic effects of the ventricular septal defect appeared to be minimal to mild at this time. Further classification of the ventricular septal defect was unable to be determined. No overt evidence of additional clinical issues, such as systolic dysfunction, stenotic disease, significant valvular insufficiencies, additional shunts or evidence of clinical pulmonary hypertension. No indication for cardiac medications at this time. Recheck echocardiogram is suggested at 4-6 months of age, with specific attention paid to the area of the ventricular septum, potentially in the area of the LV outflow tract. Recheck echocardiogram suggested sooner if clinical signs suggestive of heart disease arise as well as prior to anesthetic considerations.





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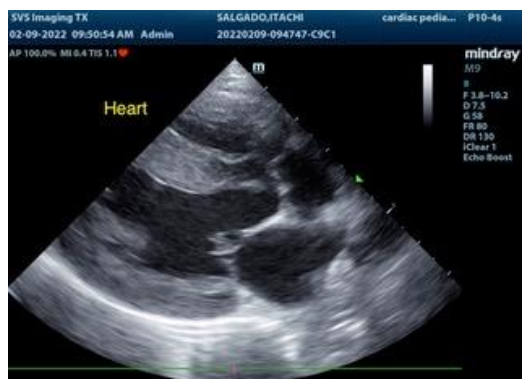
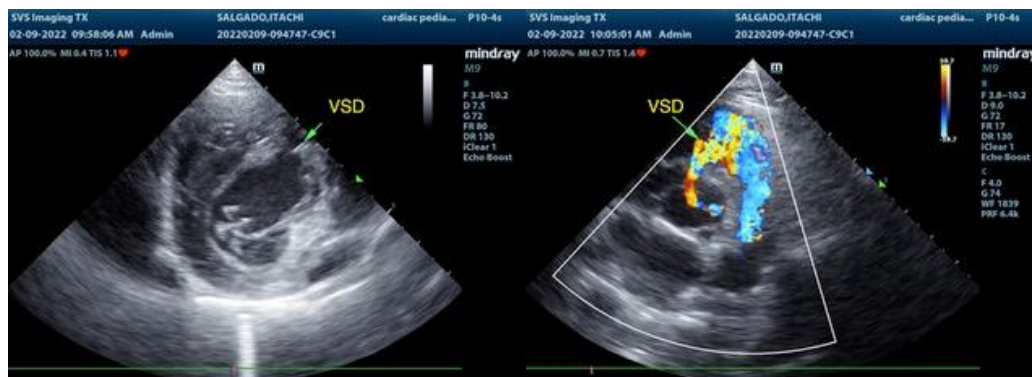
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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