



PATIENT

Ruby Morsch

SPECIES

Canine

BREED

Basset Hound

SEX

Intact Female

AGE

4 Months

WEIGHT

18 Pounds

INTERPRETED BY

Sara Brethel DVM,
 DACVIM (Cardiology)

IMAGING PERFORMED BY

Kathleen Byrnes

HOSPITAL NAME

Chatham VS

REFERRING VET

Dr. Scott

INVOICE

36834

DATE

12/9/25

PRESENTING CLINICAL SIGNS

History: P presented for echo due to murmur- r dvm hearing it in very small area. Owner would like to spay at 6 months. Please comment on risk of anesthesia and best protocol.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (M-Mode)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	--	--	1.25	1.0	34.48	--	NM
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LAD LA MAX 4 Chamber	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	184	1.14	1.04	8.18	2.8	2.9	1.9

RAD: 2.3, VSD VMAX: 4.66

Cardiac Presentation

The mitral valve leaflets are normal and there is no mitral regurgitation. There is no prolapse of the mitral valve leaflets. The left atrial size is normal. Left ventricular systolic and diastolic function is within normal limits. The right atrium is at the upper limits of normal without evidence of tricuspid regurgitation. There is no prolapse of the tricuspid valve leaflets and no evidence of pulmonary hypertension on today's evaluation. The right ventricle subjectively appears normal in structure and function. The aortic valve is trileaflet and has normal corresponding outflow velocities. There appears to be a small perimembranous ventricular septal defect with a possible aneurysmal component. The pulmonic valve leaflets are normal and have normal corresponding outflow velocities. There is no evidence of pulmonic or aortic insufficiency. The aorta appears dilated. The pulmonary artery and associated branches appear normal. There is no evidence of pleural effusion, pericardial effusion, or intracardiac masses.

ULTRASONOGRAPHIC FINDINGS

- Perimembranous ventricular septal defect with possible aneurysmal component
- Dilated aorta
- Suspect VSD is left to right shunting



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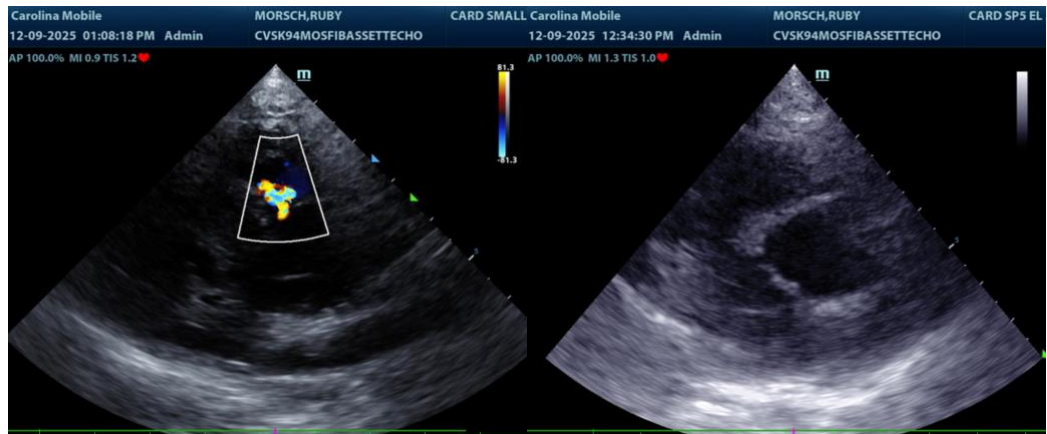
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The patient appears to have a ventricular septal defect. At this time, the defect is small. There is a potential aneurysmal component meaning that a portion of the aortic wall appears to move during systole and diastole within the region of the VSD. This is something that may resolve on its own. It is unknown the clinical significance, however, often times, small ventricular septal defects are incidental findings, and do not cause problems later in life, but serial monitoring is recommended, as sometimes these conditions can cause heart enlargement, and in severe cases, heart failure. These cases with smaller defects are less common.

The patient appears to be an adequate candidate for anesthesia. Standard perioperative fluid rates should be well-tolerated. Medications like dexmedetomidine and other alpha 2 agonists are best avoided. Ketamine is also best avoided. Anticholinergics can be used in the case of a clinically significant bradyarrhythmia (i.e., bradycardia with concurrent hypotension). If the patient is on an ACEi, recommend not giving this therapy the day of anesthesia.

Recheck echo is recommended in 4-6 months. Due to the congenital disease and the abnormal wall motion of the aorta, can consider a referral to a veterinary cardiologist.



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.

Sara Brethel DVM, DACVIM (Cardiology)

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