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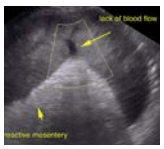
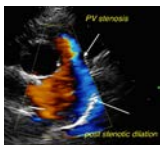
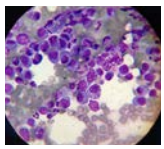
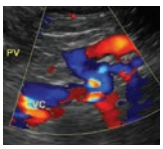
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

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1-800-838-4268 info@sonopath.com

PATIENT
Penny Salzman

SPECIES
Canine

BREED
Pit Bull X

SEX
Female

AGE
1 Year

WEIGHT
51.3 Pounds

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

IMAGING PERFORMED BY
Kim Liedberg

HOSPITAL NAME
SVS Imaging WI

REFERRING VET
Dr. Fred Gromalak

INVOICE
33126

DATE
11/30/21

PRESENTING CLINICAL SIGNS

4/6 heart murmur was noted at PE prior to spay. Are there any anesthesia risks?

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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			NM	1.41	39.2	70.4	0.28
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	102	3.1-3.4	0.8		3.6	3.8	

Cardiac Presentation

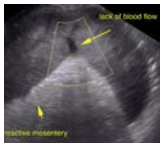
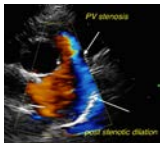
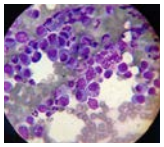
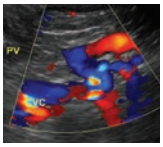
The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. 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 systolic turbulent flow with subjective atypical to mildly thickened aortic valve. Color doppler assessment also revealed concurrent diastolic aortic insufficiency measuring approximately 3.0 m/sec. 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. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window. No evidence of arrhythmogenic disease.

ULTRASONOGRAPHIC FINDINGS

- Elevated LVOT velocity and associated AV insufficiency – consistent with mild AV stenosis.
- Sonographically unremarkable and functionally normal LA/LV

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is most consistent with mild AV stenosis given the elevated LVOT velocity, sonographic appearance of the AV valve, and associated AV insufficiency. The stenosis is considered mild at this time based on estimated pressure gradient. No evidence of left ventricular hypertrophy

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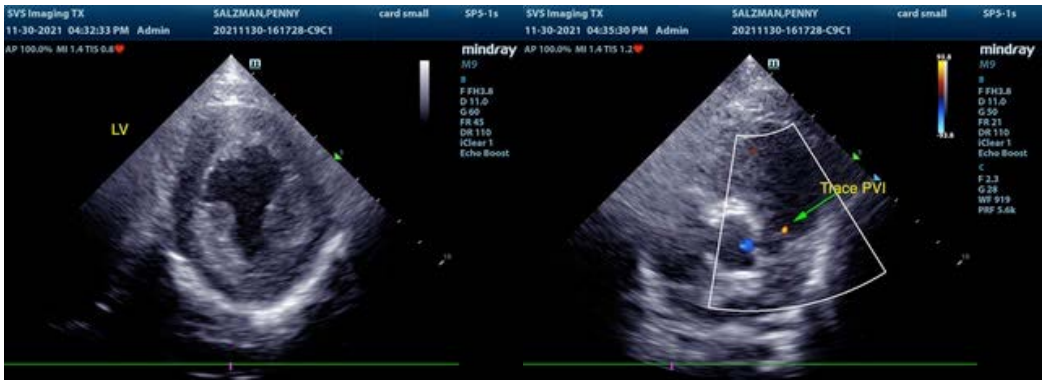
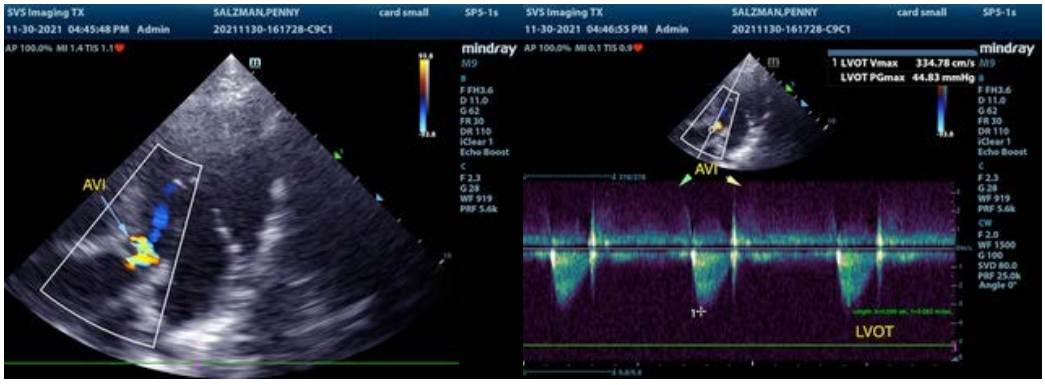
present at this time. Additionally, no other clinical issues such as systolic dysfunction, additional valvular insufficiency/stenosis or overt shunt was noted. Immediate future risk for complication is considered mild given the lack of cardiac changes and estimated pressure gradient. However, prognosis may be variable. Given these findings, no overt anesthetic contraindications in light mild AV stenosis. Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists. Alternatively, cardiology consult could be considered prior to anesthetic considerations. If cardiology referral is not possible, recheck echocardiogram suggested in 6 months, sooner if clinical signs consistent with AV stenosis are noted.





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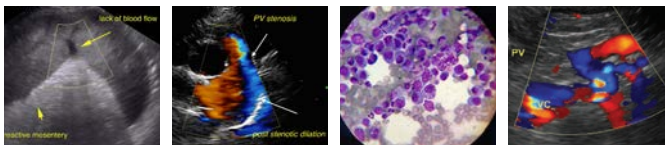

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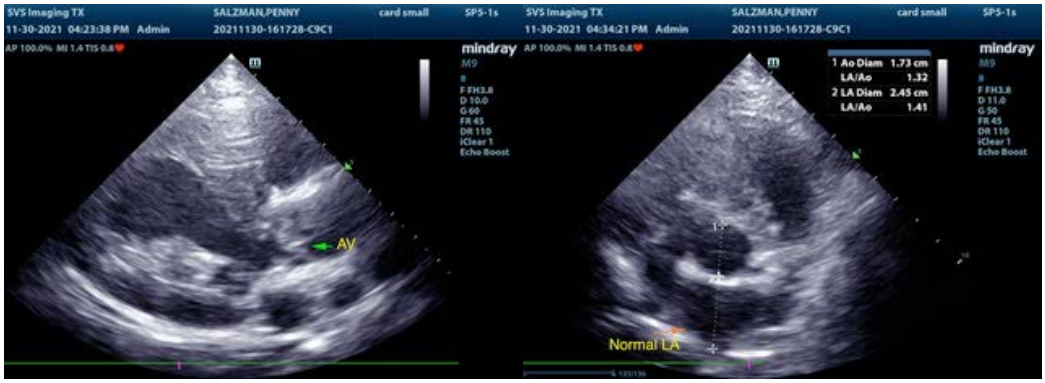

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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